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THE TIMES (TIMES PAST)

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Your money or your jobs!

In the translation of next year's recurrent grant to the universities into a cash figure the Government has presumably made an allowance for a 4 per cent increase in salaries from April 1. As almost three-quarters of the income of universities is consumed by salaries this extra allowance will be a substantial sum, at least £30m – and as universities are (just about) autonomous institutions it is possible for them to conceive of different and perhaps better ways to spend this extra money than on an across-the-board salary increase. It could be used to save jobs.

If universities are allowed to keep this allowance for salary increases, even if salaries are not in fact increased by the amount assumed, then it is comparatively simple to construct a formula which shows that *x* jobs can be saved for every percentage point which the actual salary settlement on April 1 falls below the Government's 4 per cent norm.

For this reason the idea of offering only a token increase or no increase at all is being informally but persuasively canvassed by some university leaders, while the strange silence of the Association of University Teachers on salaries suggests that they are toying with the same idea.

Clearly the judgment that must be made by both the universities as employers and by university teachers and other workers is one of peculiar delicacy and sensitivity. There is no obviously correct answer. The idea of trading salary increases for jobs can neither be enthusiastically accepted nor dismissed out of hand without careful thought. It is also an emotional issue.

After all the Government is the author of the cuts which have faced the universities and the AUT with this unpalatable dilemma. So it could be accused of indulging in blackmail – your living standards, or your jobs! For both reasons instinctive reactions to this dilemma of money or jobs are unlikely to be a sound guide to the best tactics.

The first question that must be asked is whether in fact such a trade is possible. Some highwaymen have been known to take your money *and* your life even after promising to preserve the latter if the former is sacrificed. So the universities must be very careful that any concession on salaries is not in vain. In fact this trade does seem to be an active possibility. In his reply to Professor Marris's open letter in *The Times* Sir Keith Joseph wrote: "If nationally university teachers settle for less than 4 per cent, I will guaranatee that the cash to be made available to the universities will not be reduced because of this."

Of course, such an offer cannot be entirely without ambiguity. "The cash to be made available to universities" has been announced in an ambiguous form, and Sir Keith's guarantee is confined to the promise that it will not be reduced "because of this". After all, it was not so long ago that the universities were promised level funding by this same Government. But on balance Sir Keith's offer seems to be genuine and, in his own terms, fair-minded. It is fairly clear that the Government has already cut the universities' income over the next three years by about as much as it can get away with without running into significant political trouble.

It is difficult to feel grateful. Even if the Government wanted to run down the university system at a faster rate and beyond 1984, it would probably be impracticable from both a legal and an economic point of view. So the slight amelioration in the position of the universities since the autumn is little more than the Government making a virtue out of necessity. In any case a minimum show of flexibility was probably necessary to answer powerful critics of the cuts already announced.

It is in this context that the "restructuring" fund, the reassuring leaks that no further cuts are planned after 1984, and now Sir Keith's offer make the best sense. Yet it is precisely because the Government's own interest is to show flexibility on this question of pay or jobs that this offer is almost certainly genuine.

However, intentions are one thing; implementation is quite another. A trade-off between money and jobs is not a simple switch of resources without long-term consequences. Jobs that are saved by foregoing a salary increase one year must go on being saved year after year. There is therefore at least the possibility of a long-term erosion of the standard of living of those who work for universities. This danger is made more real by the fact that a foregone salary increase means that negotiations in future years start from a lower base. So the drawback from the point of view of the AUT is that a new and stubborn anomaly may be created while only a few jobs may be saved, and some of these only temporarily.

The offer also presents difficulties for the Government. As has been found in the case of the colleges and polytechnics, it is almost impossible to achieve a substantial and secure reduction in public expenditure without corresponding reductions in manpower. Otherwise expenditure patterns are unproductively skewed to maintain employment or the still excessive number of staff produces a continuing and perhaps irresistible upward pressure on expenditure.

Sir Keith's offer might allow some universities to hang on until they are saved by the defeat of this present Government at the next general election. Whether such a hope of deliverance by Neil Kinnock or the Alliance is illusory or not, it must be a matter of concern for a Government which claims to want to see not just a reduction in public expenditure on higher education but a radical restructuring of the system.

For the universities themselves Sir Keith's offer is by no means the unambiguously good news it may have appeared at first sight. How can university teachers at York or Bath be persuaded to forego salary increases which they regard as moderate and fully justified in the hope that this may save a few jobs in Salford or Aston?

Is it in the interests of the universities to restrain senate majorities which may wish to spend any windfalls on equipment or to unfreeze vacant posts rather than to preserve the maximum number of existing jobs – because clearly the AUT would have to be given some kind of guarantee that any restraint on salaries would actually be applied entirely to protecting jobs and not diverted to other purposes? Is it in the long term interest of universities to acquiesce in the erosion of the living standards of academic staff? Although in general supply may vastly exceed demand in the academic labour market, such an erosion of salary levels would tend to make the profession more closed. What about the position of non-teaching staff? Are the universities prepared to offer them the same deal which they are being offered by Sir Keith, or would non-teaching staff continue to be underpaid and easily dispensable? .

For all these reasons the suggested trade between this year's salary increase and next year's jobs should be approached with great caution. Although even in the public sector of the economy there is a broad correspondence between the level of salaries and the number of jobs, there are clear dangers in stretching the analogy of private enterprise too far. Lower wages will not produce more jobs, or maintain existing ones, in anything but the shortest term, because the threat to jobs in universities is not the results of high wages but of a political decision to cut public expenditure. Lower wages therefore cannot stimulate demand under these constrained conditions, because in the medium term politicians are just as likely to conclude that the existing system of higher education can be run more cheaply as that lower costs open the door to an expanded system.

The essential problem with Sir Keith's offer is that its advantages are short-term, perhaps even confined to a single year, while its disadvantages extend over a much longer period. Perhaps in the present crisis the short-term is all that matters. But even if this is true, the best way forward is probably still a conventional negotiation, influenced naturally by the knowledge that the income of universities is both fixed and grossly inadequate, rather than a special deal that sought to link directly money and jobs. In the end it may not make much difference to the outcome.

Teacher supply take-over

The reformed Advisory Council for the Supply and Education of Teachers, as its revised title implied, was intended to concentrate on producing a coherent educational framework for teacher training rather than to allow itself to be ground down by questions of supply. The turmoil of the 1970s was to be succeeded by a decade of more considered policy formation. Sadly there is little evidence that this is happening.

This is bad for the schools, bad for teacher education, and even bad for the Government. Is it really sensible to allow a situation to develop in which primary school teachers are trained through a BEd route while secondary teachers are trained predominantly through a PGCE route? Comprehensive reorganization, middle schools, and separate arrangements for sixth forms have long ago upset the neat and pernicious dichotomy between primary (=elementary) and secondary (= grammar school) education. Are we content with this restriction of the scope of the BEd, and conversely do we really feel confident that an almost inevitably academic first degree topped up with an inevitably superficial postgraduate certificate is really the best training for teachers in a modern school system?

All these are questions that should be thoroughly and publicly debated through ACSET. Certainly they should not be casually and accidentally answered as a by product of some crude exercise in the management of supply. In the same way the idea of centres of excellence in teacher education should be examined to see whether it is anything more than a euphemism for closures. Finally, of course, the Department of Education and Science should recognize that the experience of the 1960s and 1970s has shown that decisions taken within the cramped context of teacher supply are often bad supply decisions. If the whole system to be thrown into reverse when the primary bulge of the 1980s becomes the secondary bulge of the 1990s? In anything but the extremely short term educational decisions are likely to be the best supply decisions as well.

Laurie Taylor

I see they've occupied the admin block.

Yes, I saw the banner as I came past. Something about "Stop the Cuts – Defend Our Universities".

Pointless.

S'pose so.

Absolutely pointless. I mean who's the argument with? What's the *real* argument with?

Well, it's the . . . er . . .

Not the administration is it? Not the vice chancellor? Or the registrar?

No I suppose not.

It's with the Government. *The Government.*

Oh yes.

And all those students are doing with their so-called "occupation" is playing right into the Government's hands.

How's that?

Obvious. If the Government wants to run down the university system – what could be better than big headlines all over the papers showing mobs of students playing at radical politics.

I see.

Mind you, I don't know what's radical about walking 50 yards across the campus to the comfort of the admin. block. Do you?

No . . . er . . . not really. No.

Have you seen their handouts?

Not yet, No.

Seen one – you've seen the lot. Ungrammatical. Just like last time and the time before that. Signed by the "Occupation Committee". Full of stuff about solidarity and consciousness.

Really?

Oh yes. You'd think they were Gdansk shipyard workers instead of over-privileged youngsters taking a chance to miss a few lecturers?

That's certainly a point.

I wouldn't mind so much if it wasn't so damned divisive. Look at that AUT vote this morning. Nearly unanimous. Demanding an end to the occupation. Stand against students. What good does that do?

Not a lot, I should think.

You're right. And what's laughable is that they think it's going to be 1968 all over again. Nothing further from the truth.

Mmmm.

Anyway what annoys you about the occupation?

Erm . . .

All those ridiculous "alternative" seminars?

Well, I . . .

General disruption of academic life? No telephone calls? No mail?

Not quite. I . . .erm . . .

What then?

I know it sounds a little wishy washy and liberal but . . .

Never mind. Let's hear it!

You know, sort of neither one thing or the other.

Speak up!

Well, quite frankly – I just can't stand the conversations you have to have about it.

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Polys to bear the brunt of future cuts

Universities are likely to enjoy level funding from 1984 with the burden of future cuts in public expenditure falling on the polytechnics and colleges.

This would mark a radical break with the policy of evenhandedness between university and public sectors which has been a cornerstone of DES policy since the later 1970s, first under Labour and more recently the Conservative Government.

In a letter to Mr Christopher Price MP, chairman of the House of Commons Select Committee, dated March 9, Sir Keith Joseph, the Secretary of State for Education and Science, said that the Government's present evenhandedness could be demonstrated by the fact that both universities and the public sector were to be cut by 7 per cent in real terms between 1980–81 and 1982–83.

But he made no mention of evenhandedness in later years. Ministers have already said informally that this policy is to be reviewed and that the two sectors of higher education can not always expect to receive equal treatment.

In the polytechnics and colleges any formal retreat from this policy will cause dismay because evenhandedness was always regarded as second-best to a policy of positive discrimination in favour of the public sector which they believed was implicit in the original binary policy.

Mr William Waldegrave, Undersecretary for Higher Education, last week repeated his rejection of the binary system and said the policy of evenhandedness would be re-examined when higher education budgets for 1983–4 onwards are divided up.

Mr Waldegrave told journalists that the 13 per cent cut in student numbers included in the White Paper was "huge" but economically inevitable. He departed from previous Government practice in accepting that the declining number of 18-year-olds would not affect demand for places in higher education. "I do not defend the cuts on the basis of the birthrate," he said. "The cost of a fall in places will be real."

The growing sensitivity of the Government on the subject of university cuts has already won for the University Grants Committee three important concessions. The end of evenhandedness could be a fourth.

The first was its success early last autumn in persuading the Government that further cuts were out of the question. The original demand from the Treasury had been for cuts of between 5 and 8 per cent on top of the cuts announced last winter and distributed by the UGC in July.

The second was the equally unexpected accuracy of the grant provisionally determined for next year, 1982–83. It had been widely expected that the provisional triennium wrung out of the Treasury by the DES and the UGC last spring would change. In fact last week's public expenditure White Paper showed it had been kept to almost exactly. With a general election due before May 1984 no one now expects the provisional grant for the third year of the triennium to be seriously modified – at any rate downwards.

The third was the Government's agreement to a formal redundancy scheme for university teachers.

Further evidence of the Government's growing sensitivity to criticism of its policy towards universities came in the deliberate leak by the Prime Minister's office of Mrs Thatcher's conversation with Dr Edward Parkes, chairman of the UGC, about the committee's decisions on Salford.

This leak was intended to prove first that university cuts were sufficiently important in the eyes of the Government to deserve the personal attention of the Prime Minister, and secondly to signal the Government's approval of the UGC's policy of selectivity.

Dr Parkes has also been told that in future he may, within reason, defend the actions and policies of the UGC in public. The past convention has always been that advice from the UGC should be treated in the same way as advice from civil servants and so remain confidential.

Although the distribution between universities and polytechnics and colleges of the higher education budget for 1984–85 has still not been decided, the most likely outcome is that for the universities a policy of "enough is enough" will prevail with unknowable but probably unpleasant consequences for the public sector.

continued on page 2

Mr Mop is a shining example

Leicester Polytechnic student Ken Mounter refused to be floored by an anomaly which denied him a grant.

He became an early morning cleaner at the polytechnic because he cannot get funding for his sandwich course placement in the Leicestershire probation and after care service.

He is not being paid for his stint in the community service unit because of an anomaly in the regulations covering the progation service, the local authority and the polytechnic.

Despite his problems, Ken says: "My experience has confirmed my desire to enter the probation service after a master's degree course."

NAB runs into its first row

by John O'Leary

Appointments to the academic groups which will form the basis of planning the future shape of polytechnics and colleges caused the first row in the National Advisory Body this week.

Representatives of the institutions, together with Dr Edwin Kerr, chairman of the Council for National Academic Awards, tabled a 12-page paper criticizing the basis for appointments to the first five working groups and demanding that decisions be taken by the full board.

The paper was signed by Dr Ray Rickett and Dr William Birch, of the Committee of Directors of Polytechnics, Mr Neil Merritt, of the Standing Conference, and Dr William Bosley, of the Associaton of Principals of Colleges. It challenged the right of the NAB Committee, the top tier of the new structure, to delegate power to make the appointments to Mr Christopher Ball, the chairman of the board, on which the institutions are represented.

No objections were raised to individuals nominated by Mr Ball although the institutional representatives are known to be critical of the proportion of college and polytechnic staff chosen.

Quoting the terms of reference given to the NAB, the paper argued that appointments were the province of the board alone. The signatories, who had previously raised the question with Mr John Bevan, secretary of the NAB, saw the issue as fundamental to the ability of the board to steer the course taken by the new national body.

However, members of the board, which met on Tuesday, voted to accept the way in which the first groups were appointed and to set up a small sub-group for future use. It was agreed to recommend the committee not to involve itself in the selection of members of working groups.

Mr Ball said later that he had taken wide-ranging advice on the initial appointments but had not consulted committee members since they were academic judgments. The board was too large to make such decisions and he was sure that the committee would not wish to do so in any case.

The committee, which meets on Monday, will be asked to approve the establishment of a sixth working group, on liaison between higher education and industry and commerce.

Help for mid-career students

by Charlotte Barry

Long-awaited details of the Government strategy to promote more mid-career refresher courses in universities and colleges will be announced shortly.

Education Secretary Sir Keith Joseph will unveil the programme at a conference organized by the British Association for Commercial and Industrial Education in London on May 18.

This is 18 months after the publication of the Department of Education and Science discussion document *Continuing Education: Post-experience Vocational Provision for those in Employment* which excited the adult education sector.

The DES will be setting up regional workshops to stimulate the development of mid-career courses and promoting coordinating machinery.

Institutions will be urged to make more use of distance learning methods including written materials, audio and video cassettes so students can plan their studies round the working day.

The department has also given the Further Education Unit £100,000 a year for three years to promote special projects in the field of post-experience vocational education.

However the DES still expects the scheme to be largely self-financing from fee income, in spite of widespread criticism of this. At the same time it is exploring the possibility of introducing paid educational leave with the Manpower Services Commission, and the Departments of Industry and Employment.

News of the long-awaited announcement was welcomed with caution by the Polytechnic Association of Continuing Education.

Holy order for a job change

Is the spiritual welfare of students at Glasgow University in danger of being taken over by a redeployed sociology lecturer? Heaven forbid. Or will the rabbit add the presbyterians to his flock?

For the university is to appoint a part-time chaplain but will transfer a member of staff to the post.

However, it seems that radical opinion is not to be the divinity faculty is stacked with ordained ministers of Scotland, ministers, any of whom might feel themselves called to the chaplaincy – particularly since the faculty is considering a number of theological rationalisations.

Long distance merger proposed for London

by Ngaio Crequer

London University's Bedford and Royal Holloway colleges are considering a merger proposal which would mean a wholesale move of Bedford to the RHC site at Egham, Surrey.

But as talks continue, Bedford staff still favour a merger or possible transfer of departments with Westfield as the first priority, although they want negotiations with RHC to be pursued in parallel.

This week, Professor Randolph Quirk, vice chancellor of London University addressed all staff at Bedford and gave his enthusiastic support to the RHC proposal.

Bedford had earlier rejected a possible alliance with Westfield and later talks with King's also broke down. Royal Holloway is known to be in favour of a Bedford merger; although they previously had talks with Brunel.

Staff at Bedford this week rejected a paper presenting the case for "going it alone" so some kind of merger, but with whom, seems inevitable. Councils were discussing various proposals yesterday.

The confidential talks between Bedford, in Regents Park and RHC will surprise many because of the 25 miles between the two colleges which have about 1,500 students each. Many staff have expressed opposition because of the distance.

A number of possibilities for the merger have been canvassed. One is an abrupt move of Bedford to RHC, taking only about two years, to cause as little disruption as possible. Another is to spread the move up to ten years, but this would be costly because the Bedford site would have to be maintained.

Some academics favour keeping a small base in London to enable staff to use the university's central facilities.

ILEA to probe poly management crisis

by Charlotte Barry

The Inner London Education Authority has set up a committee to investigate the funding and management of the strife-torn Polytechnic of Central London.

The polytechnic's court of governors agreed this week to nominate three lay members to the special working party headed by Mr Neil Fletcher, chairman of ILEA's further and higher education subcommittee.

The authority's subcommittee decided last week to withhold the polytechnic's funds until it resolves its financial crisis, but approved block grants for the four other inner London polytechnics.

The committee will be investigating the polytechnic's top management structure and system of financial control; the £600,000 deficit including £250,000 losses on non-block grant activities; and examining the level of administrative staff to make recommendations to the court of governors.

It was set up on the recommendation of a report signed by all five ILEA representatives on the court of governors who are concerned at the failure of PCL rector Dr Colin Adamson to keep them properly informed. Outside auditors have already criticized the polytechnic for lack of accountability and control.

The ILEA governors' report says: "It was established that only the rector ever saw the whole picture of the polytechnic's financial affairs, and that some aspects of these affairs, which have been causing concern to our auditors, have never been reported to us.

We are deeply concerned about and very much regret this sorry situation. It is obvious that as governors we have been kept in ignorance and that we have therefore failed to do our best for the polytechnic."

The polytechnic also heard this week that the Council for National Academic Awards is threatening to withdraw recognition for its part-time diploma in linguistics, the only one of its kind in the country.

The CNAA has said it will only consider revalidation provided there are a sufficient number of senior academic staff running the course. The vacant posts of two heads of department in the school of languages are frozen as a result of Dr Adamson's recovery plan, which has been condemned by staff and students. Senior administrative staff have also written to the court of governors complaining about the detrimental effect of freezing more than 50 non-academic posts.

Staff warned off service contracts

by David Jobbins

A conditions of service agreement fixing a maximum 15-hour teaching week could lead to redundancies, Northern Ireland Polytechnic has warned the lecturer unions.

The polytechnic management says quantifying teaching hours would erode academiic freedom, do great disservice to teachers engaged in high-level work – and could attract increased attention from the auditor-general.

The cash limit on the polytechnic's annual budget means "it is not possible to cope with binding and inflexible agreements on staff teaching time without running the risk of staff redundancy at very short notice."

The auditor general could demand evidence that the polytechnic would be able to monitor attendance and ensure value for money. "Increasingly the auditors have taken the view that their remit extends to questions of value for money and we have had to give responses on various issues," says the management.

Northern Ireland Polytechnic, directly financed by the Northern Ireland Department, is the only polytechnic not to have a conditions of service agreement which sets a limit on teaching hours.

The National Association of Teachers in Further and Higher Education and the Association of Polytechnic Teachers, are angry that the management's views on this issue have been circulated to directors of study during confidential negotiations. The secretary of the polytechnic's Natfhe branch has written to Dr O. M. White, pro rector for administrtion, saying the move has undermined any possible progress.

The present talks are a stiff test for the polytechnic's new negotiating body, on which the two unions – bitter rivals in England and Wales – are equally represented.

The response, circulated with a request for timetables to provide information for future negotiations, makes it clear that the management is fundamentally opposed to putting a limit on teaching hours.

It says such a step would be "illogical" when teaching is so variable and partial an element of academic staff work.

Natfhe and APT says there is no evidence to link implementation of a conditions of service agreement with redundancies.

Aston plans to lose students

Aston University was this week considering a further cut of 300 student places over the next three years on top of a cut of 1,040 places demanded by the University Grants Committee by 1984.

If agreed the number of students at Aston will have fallen by 25 per cent in four years, from 5,280 to 3,940. The move is aimed at improving the university's cost per student, again at the request of the UGC.

The UGC has made clear that if Aston makes extra cuts in its student intake it will not affect the level of recurrent grant it receives. Aston is facing a cut of some 30 per cent in its grant from £14m in 1980–81, to £9.8m by 1983–84.

The senate was discussing the proposal this week, along with a second one, likely to be tightly contested, to increase fees for overseas students by 20 per cent more than the Government minimums so that arts students would pay £3,000 a year instead of £2,700, and science students £4,320 instead of £3,600.

The senate will also consider a proposal to cut the library budget by 30 per cent over three years, from £769,000 to £556,635. Students incensed by the scale of the cut had demanded that Professor Dennis Ager, library committee chairman, should resign for not opposing the cuts vigorously enough.

They argued that library provision was already inadequate, and what was needed was to extend opening hours and buy more books. But a motion calling for Professor Ager's resignation was withdrawn at a meeting earlier this week when it was clear it lacked any support. Students were still operating an overnight "work-in" to draw attention to the scale of cuts.

Scientists at NASA, the National Aeronautics and Space Administration, put the finishing touches to the first British experiment on board a Space Shuttle to be launched next week. The microabrasion foil experiment on cosmic dust was developed by a Kent University team headed by Dr James McDonnell, reader in space sciences.

Redundancy threat looms at Aberdeen

by Olga Wojtas
Scottish Correspondent

Aberdeen University seems poised to announce compulsory academic redundancies next week.

In a statement to all university staff, the principal Professor George McNicol said it was very unlikely that Aberdeen could "avoid redundancy for considerable numbers of the academic staff." The university was arguably the worst hit institution in the country, with more than half of its 23 per cent cut falling in the first year, he said. It would go into next year with "a large and inescapable overdraft" which could force the shedding of more than the present target of 160 academic posts.

Around 70 staff have applied for early retirement, but it is not known how many have opted for voluntary severance. A scheme for staff to loan or covenant money to the university, while it had yielded a number of individually very generous offers, would not make a significant contribution to university costs, said the principal, and Aberdeen faced a cumulative deficit of £6m by 1985/86.

But Mr Jurgen Thomaneck of Aberdeen's Association of University Teachers said the union could not accept anything the principal had said as it had absolutely no information on the basis for his financial projections.

"He's saying things are substantially different from December, but we can't see that exactly has happened to change things," said Dr Thomaneck.

There was no realism in the principal's projections, since the university would simply disappear if it had a deficit of £6m.

The AUT's deputy general secretary, Mr Jon Akker, flew to Aberdeen for a meeting between the branch and the principal and court members, at which the union argued that alternatives to compulsory redundancy, such as part-time employment, had not been fully explored. Union officials said the meeting "had not been fruitful."

Dr Thomaneck said the AUT had made contingency plans should compulsory redundancies be announced, and they would go to court and an industrial tribunal.

In the Commons, East Aberdeenshire's Tory MP, Mr Albert McQuarrie attacked the cuts, saying they were having a devastating effect on the university. He urged that Education Secretary Sir Keith Joseph meet Professor McNicol to see if anything could be done.

Mr Bob Hughes, Labour MP for Aberdeen North, described higher education minister Mr William Waldegrave, who visited Aberdeen this month, as Sir Keith Joseph's poodle, and condemned his university visit as "a fatuous public relations exercise costing the country a great deal of money."

● A document drawn up by an Glasgow University professors and ten other senior academics proposing a programme which rejects compulsory redundancies is being circulated at the university and will be considered by the senate's business committee.

Doctors seek more shop stewards

The British Medical Association is to establish shop stewards to fight for the rights of medical academics whose jobs are threatened by cutbacks in higher education and the health service.

The stewards, known as Powers (Place of Work Accredited Representatives), have already been established to assist consultants and junior hospital doctors. Now the system is being expanded because of the current crisis in the medical schools.

The BMA this week wrote to all Britain's medical schools requesting volunteers among academics to act as trade union representatives to guard and advise colleagues during current rounds of redundancies and early retirements.

A BMA spokesman said that medical academics had very complicated contracts because their work was shared between universities and local health services. "We have some academics who do not even know who holds their contracts," she added.

Power representatives will be given time off work to carry out their trade union activities, as allowed under employment legislation, and will also be provided with BMA training in legislation, contract work and even on how to handle press interviews.

Commenting on the decision to expand the Power network, Dr John Dawson, under-secretary for the BMA's professional and scientific division, said the expansion was "urgent because of the current crisis caused by stringent cuts in the resources allocated to medical facilities".

The BMA now believes that medical academics are suffering disproportionately because they are not only being affected by health service cuts but also by the severe reductions in the higher education system.

Art lecturers take advice

Royal College of Art lecturers are seeking legal advice on whether the college has breached its charter by trying to put staff on short term contracts.

Members of the Association of University Teachers are angry over a new one-year contract offered to 40 college lecturers to replace five-year and part-time contracts up for renewal.

Lecturers are also watching anxiously as the college prepares to discuss a controversial financial paper advocating savings which include closure of certain schools and staffing cuts to meet a projected deficit for 1982–83 of up to £565,000.

They feel particularly threatened because institutions like the RCA, funded directly by the Department of Education and Science, are excluded from national compensation schemes covering the majority of AUT members.

Mr John Akker, AUT deputy general secretary, said: "We think the college has acted far too hastily in drawing up plans to meet its financial deficit before it has clarified with the DES where it stands on redundancy terms."

Matters are likely to come to a head on Monday when the senate meets to discuss next year's budget and the financial paper prepared by the college treasurer. It suggests obliquely that £250,000 will have to come from cuts in staff.

Students meanwhile are urging the college to concentrate on raising money by the sale of assets such as rarely seen paintings.

UMIST cuts 'not needed'

Lecturers at the University of Manchester Institute of Science and Technology claim that at least £1m of proposed cuts are not necessary.

Using figures prepared by private accountants, Messrs Arthur Anderson & Co, the UMIST Association of University Teachers said this week that "at least 100 jobs are threatened by the management without 'good cause' or even 'compelling reasons of financial exigency'."

The AUT commissioned the report when alternative methods of presenting their case to management failed. An initial summary by the accountants, which backed up AUT figures, led to discussions between the accountants and UMIST personnel.

The report says the UMIST projected payroll savings of 24 per cent are overstated, the figure should be 21.3 per cent. There is also a mix of price increases and volume/consumption increase, without explanation "... between £400,000 and £450,000 represents the projected expansion of academic activities and higher consumption of steam and electricity, and not pay and price changes as implied."

The accountants question the use of a high figure representing loss of investment income suggest reducing capital expenditure and comments that many estimates are on a very conservative "worst possible" basis.

According to the AUT: "Of the £3,600,000 per annum proposed cuts in payroll only £1,950,000 is directly related to Government action. The remaining £1,650,000 cut arises from UMIST management".

A spokesman from UMIST said it was wrong to say there was a £1m discrepancy which could save jobs. The budgets had not closed the financial gap and Arthur Anderson was questioning UMIST policy.

Polys bear brunt of future cuts

Continued from front page

It is also possible that if any of Sir Keith Joseph's ideas about the "denationalization" of the universities come to anything, more private money might come into the university system. Although first thoughts about building up universities' endowments have been succeeded by soberer second thoughts, any moves towards privatization might help to ease their financial position.

A first hint of positive plans for the money saved by restructuring the universities came in the Commons this week.

Mr William Waldegrave, undersecretary for Higher Education, said: "The £200m the university system will save will make a considerable contribution, for example, to the expansion of training for the 16–19 age group, which arguably is an even higher priority."

Orwell grant keeps the aspidistras flying

by Paul Flather

A fund to encourage political literary research or writing of the kind George Orwell would have found interesting has been set up at two London University colleges.

Bernard Crick, professor of politics at Birkbeck College, has donated some £15,000 from the British proceeds of his recent biography of the famous writer to the fund which will award grants to research students at Birkbeck or University College and young part-time non-degree students at Birkbeck to produce work in the Orwellian style. Details are still to be agreed, but grants from next year are likely to average £500.

Professor Crick said there was a dearth of literary figures interested in politics or political figures interested in literature in Britain. "This kind of figure is much more common in France or the United States. There is a terrible gap here between academic and popular writing."

He said he was sure Orwell himself would have wanted to give the money to young writers. To date Orwell's estate has not put any money into similar projects. The prestigious Orwell Memorial Prize is funded by Penguin Books.

Trustees of the fund include Professor Crick, Karl Miller, professor of English at University College, Eric Hobsbawm, professor of history at Birkbeck, and playwright Arnold Wesker. They are appealing for extra donations from Orwell's friends.

Professor Crick: hopeful

Councillor accused of £5m blunder

by Charlotte Barry

Unions at Birmingham Polytechnic have accused the city council leader of making a £5m blunder over the polytechnic's finance.

They are to meet Councillor Clive Wilkinson to challenge his statement that Birmingham ratepayers subsidize the polytechnic by more than £5m a year.

The joint union committee says that the true figure is just over £1m, and covers the cost of non-advanced courses which comprise about 10 per cent of the polytechnic's total provision.

The polytechnic is being forced to axe the equivalent of three major departments in the face of cuts which could lead to compulsory redundancies. Next year's budget has been reduced by £750,000 following the city council's refusal to fund the shortfall between the advanced further education pool allocation and the 1982/83 estimates.

Members of the National Association of Teachers in Further and Higher Education at the polytechnic are to stage a half day strike next Tuesday and lobby the Birmingham education committee meeting. More than 500 staff and students demonstrated outside last week's meeting of the further education committee.

The three London boroughs which jointly fund Middlesex Polytechnic were meeting separately this week to discuss a request to provide the £410,000 shortfall on the polytechnic's estimates for next year.

Last week the joint education committee representing the boroughs of Barnet, Enfield and Haringey failed to give immediate agreement to provide the extra cash. While Barnet and Enfield felt they could agree to provide contributions, Haringey asked for the decision to be delayed.

Treble chance for PGCE

by Patricia Santinelli

The University Grants Committee has asked all university departments of education whether intakes to primary postgraduate teaching courses could be nearly trebled by 1986.

Dr Edward Parkes, chairman of the UGC has asked for a reply by this week on whether numbers on PGCE courses could feasibly rise from the current 390 to 1,000. The Advisory Committee for the Supply and Education of Teachers meets to discuss the issue at the end of the month.

Department of Education and Science projections indicate that the demand for new primary teachers will rise from 2,100 in 1983/84 to 10,500 in 1989/90. At the same time secondary demand is anticipated to decrease radically and not to rise again until the mid-1990s.

The UGC has asked each department of education whether it could achieve the shift from secondary to primary indicated by these figures and if so what numbers could they admit on their courses by 1986/87.

Only 16 of 29 university departments of education have any primary PGCE training.

NUS seeks tertiary democracy

by David Jobbins

Wide-ranging changes in the universities which would inevitably enrage the academic establishment have been called for by the National Union of Students.

NUS wants to ensure democratic control at regional and local level, and to broaden the range of courses in an effort to move away from the constraints of the past 20 years.

In a policy document it says the principle of university autonomy has failed both society and now the universities.

NUS seeks two fundamental changes. "First the universities must be brought under greater democratic control at local and regional levels so that they become better able to respond to educational needs at those levels. Secondly, further and higher education must start to be planned as a whole at national level."

A national body to plan all post-school education would be needed, on which local and regional authorities, staff and students, and external interests including the trade union movement, industry, commerce, and the professions would be represented.

Lay membership of university senates should be introduced, and representation of community interests on faculty and departmental committees considered, NUS believes.

And it calls for a more significant role for the non-academic staff in university government.

"It is not only academics and students who have an interest in (or ideas for) the running of their institutions. Consideration should be given to non-academic staff having greater representation on university council and other major committees, and to the introduction of genuine industrial democracy."

On the content of courses, NUS criticizes the slow rate of change over the past 20 years. The academic single honours degree still dominates and should give way to integrated interdisciplinary courses providing a broad range of skills.

New ways of study must be found to broaden access and enable students to make full use of the education system. Modular courses, a national system of credit transfer, and flexibility between full and part time study are demanded.

The union also calls for steps to improve the quality of teaching. "Lecturer training and staff development receives little more than lip service," the document says.

"Academic dependence upon text books as the source of all knowledge must be reduced and challenged. Good teaching is inevitably teaching that motivates and responds to student opinion and student demand."

NUS leaders are aware their proposals will be far from popular with the university establishment, in which they include academic staff – but the response of "the oldest, most prestigious and most entrenched part of the education system" to the major upheavals of technological change and, youth unemployment, will determine its future existence, they warn.

(The Future of the Universities, NUS, 3 Endsleigh Street, London WC1 0DU.)

OU tests private viewdata system

Open University staff can now keep up to date with campus news by using the instant information service on computer terminals located round the site at Walton Hall. The electronic newspaper scheme has been devised by Malcolm Lane, editor of the staff journal *Open House*, and is being used to test Optel, the private viewdata system.

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Book prices rise less than feared

by Paul Flather

The price of academic textbooks has risen no more in recent years than the price of other common manufactured goods in Britain, according to a pamphlet by the Publishers Association.

Textbook prices rose by 74 per cent between 1974 and 1980, while the prices of some common manufactured goods such as tobacco, fuel, light, transport and vehicles, with comparable indices rose by more than 150 per cent in the same period.

Mr John Davies, the association's education director, said: "College lecturers frequently ask why book prices have gone up so much. In fact the prices have not outpaced the prices of other manufactured goods, and we do not make fat profits."

The pamphlet says publishing companies take as profit much the same percentage share of a book's retail price as authors receive in royalties. Breaking down the expenses of an average textbook, 10 per cent goes to profit before tax, and 9 per cent to author royalty.

The full breakdown involves 35 per cent of the price going as discount to the bookseller, 8 per cent on marketing, 9 per cent on fixed costs, 5 per cent on editorial costs, and 17 per cent on production costs.

The university and college book trade had a turnover of £70m in 1980, which is not considered large. The trade is said to resemble a cottage industry, with each textbook editor acting like a small entrepreneur trying to satisfy a particular demand. In recent years it has fallen in real terms.

Publishers have tried to resist rising costs by turning to new technology, and by using printers in the Far East including Singapore, India and Hongkong. Paper costs have risen by 180 per cent, print costs by 190 per cent and binding costs by 226 per cent.

"Our production costs have been pushed up enormously in recent years," Mr Davies said. "When people criticize the price of books very often they do this out of a lack of knowledge. The is why we produced the pamphlet."

Three additional problems for the 140 publishers who are members of the association's university and college publishing council, are the increasing demand for free sample copies, increasing numbers of unsold returns, and the growing second-hand market in textbooks.

Mr Davies warned that the decline in library budgets coupled with a drop in student enrolments would mean even shorter print runs and increasing prices in the foreseeable future. Surveys show that universities have reduced spending on book purchases by 40 per cent in the past six years.

The Economics of University and College textbook publishing in the UK, available free from the Publishers' Association, 19 Bedford Square, London WC1B 3HJ.

Tea-party cage houses the homeless

Twenty Macaque monkeys, faced with the prospect of being put down or sold to be killed for research as a result of Stirling University's cuts, have been bought by the International Primates' Protection League and found temporary refuge in Edinburgh Zoo. There is disagreement, however, between the university and their new owners over their future.

Stirling psychology lecturer Mr Arnold Chamove wants the monkeys moved to an 100 acre island in the Firth of Forth, where it could still be possible for students to study their behaviour.

But Mr Cyril Rosen of the league objects. "The climate would be extremely cold and there's no way you could police an island and keep it safe from people deciding to go monkey hunting on a Friday night. Studying the monkeys in natural surroundings makes a good PhD thesis, but monkeys are not interested in getting a PhD."

The monkeys now need "the best environment available," says Mr Rosen, claiming that they have been involved in "traumatic infant deprivation experiments." This has been denied by Mr Chamove, who says some infant monkeys were rejected by their mothers.

The league is determined to prevent a further link between the monkeys and Stirling. It has launched a £10,000 appeal with the St Andrews Animal Fund to provide permanent accommodation at Edinburgh Zoo – where the monkeys have been temporarily housed in the former chimps' tea-party cage which they must leave next month.

Two commercial zoos have offered to take the monkeys free of charge, but Mr Rosen said they were not necessarily suitable.

OU plans to offer full-time study

by Charlotte Barry

A group of Open University undergraduates may be awarded scholarships to spend their final year as full-time students at Warwick University.

The experiment, which has yet to get final approval, will be initially confined to the history departments of both universities. It will enable OU students, who study part-time at home, to complete an honours degree in five instead of six to eight years.

The students will have already studied for at least three years and accumulated four out of six full credits. They will be able to slot into the final year at Warwick because its degrees are based on a unit system.

The final class of degree, awarded by the OU, will depend on a computer analysis of the students' written performance at both universities.

The Open University is seeking private sponsorship for the scheme from industry and commerce, and is exploring the possibility of asking local education authorities to provide grants.

Professor Arthur Marwick, dean of arts at the OU, said: "I think this sort of collaborative scheme is the way higher education ought to go. I think more of our students ought to do time at a traditional university and they in turn ought to use more of our structured media-based teaching to release more staff for face-to-face work."

The first stage begins this autumn when a group of OU historians will help colleagues at Warwick to teach the uses of film and other media to first-year history students.

Next year the OU academics will help plan a new course on contemporary Europe at Warwick University which will place strong emphasis on teaching with film. In return some of the Warwick lecturers will act as assessors for OU courses.

The second stage, when Open University students will enrol at Warwick, is likely to start in 1984. The third stage would involve an exchange of teaching materials.

Natfhe expected to fight over redundancy payment

by David Jobbins

Leaders of the college lecturers' union are expected to take a tough line in next week's talks with local authority employers on new redundancy procedures and compensation.

Their resolve to achieve better payments for the 4,000 or so polytechnic and college lecturers expected to leave the service over the next two years has been strengthened by the unyielding tone of resolutions tabled for the annual conference of the National Association of Teachers in Further and Higher Eduction two months ahead.

But the employers, although split over the pay arbitration issue, are likely to remain united in resisting claims for better redundancy terms for one group of local authority workers. They are prepared to agree to improved procedures for notification and avoidance of redundancy, but Natfhe policy is to regard this aspect of its claim as inextricably linked with compensation terms and the question of one year's notice.

Intervention from another quarter – a scheme similar to that proposed for university academics offered by the Government – remains unlikely. Although officials from the Department of Education and Science and local government have been meeting to discuss the options, there has been agreement only to present a report outlining the scope of existing arrangements.

One resolution to be discussed at Natfhe's conference would instruct the national executive to ensure a scheme comparable to that proposed for the universities for anyone in the public sector who is made redundant.

Another calls for a coordinated campaign to resist each and every job loss including industrial action and a "positive drive" to eliminate systematic overtime working to expand employment opportunities for present and potential lecturers.

But the resolution Natfhe's negotiators will bear most in mind next week would reject the view that better compensation can be a solution to the threat of large-scale redundancies.

The union has made clear that its claim is not designed to cover a large-scale contraction and the resolution would prevent Natfhe's leaders from entering into negotiations in such circumstances. It would also reject any agreement which weakens or lessens the principle of 12 months' notice – whether or not this involves increased compensation.

Natfhe's claim was put forward in the wake of the dispute over the status of the earlier agreement with the Committee of Local Education Authorities, and officials have repeatedly said its object was not to deal with large scale redundancies. But its slow progress has meant it has been overtaken by Government plans to reduce manning levels in advanced further education, an intention Natfhe's leaders believe was confirmed by last week's public expenditure White Paper.

Schooling 'should be voluntary'

Compulsory schooling for teenagers should be abolished and education recognized as a lifelong process, argues a Fabian pamphlet published this week.

The author, Mr Ray Kohn, principal of the northern division of adult education in Sheffield, says that a new Education Act would enable schools and adult education to work together.

"By formally recognizing education as a lifelong process, the Act would do away with the necessity for teenagers to cram in all the information-fuelled learning they can manage before leaving school," he says.

"Schools, by operating as a true service and without coercive ground rules, will have the opportunity of forging a new image that may not alienate the majority of their potential pupils."

Mr Kohn calls for an education system which people control and which copes more effectively with social change and structural unemployment. He proposes a direct funding scheme for industrial and community groups which make adult basic education a priority.

He criticizes the liberal tradition for preventing the introduction of grants for students in basic and non-vocational adult education. "The liberal tradition, with its built-in but long-outdated notions of academic excellence, dominates the structures which determine the giving of education grants," he claims.

Seaspeak may save lives

Disasters at sea are often blamed on human error and mistakes in communication. Yet at a time when English has become established as the language of the sea, the percentage of deck officers who are native speakers of the language has declined to its lowest level of 10 per cent – although all must speak English to navigate and communicate in emergencies.

In a bid to create a simple, easily-learned version of English, a research project has been launched by the Department of Industry and Pergamon Press. With teams at both Wolfson College, Cambridge, and Plymouth Polytechnic, academics and mariners have begun work which aims to publish Seaspeak in both book and cassette forms.

In its final form, Seaspeak, a reduced version of current English, will be capable of dealing with all maritime emergency and navigation needs and could be learned within a couple of months, the director of Pergamon's Institute of English, Mr Vaughan James, said this week. He added that the intention was for the language, which has already been approved by the United Nations and other international bodies, to be used as part of all maritime training courses.

The project, scheduled for completion by July 1983, was formally launched this week by Pergamon proprietor Robert Maxwell and London University vice chancellor Randolph Quirk, who helped organize the research.

Years of work lost in laboratory fire

A fire in a medical laboratory at Southampton University has caused hundreds of thousands of pounds worth of damage and put back the work of research students by several years.

Forensic scientists were still sifting through the debris this week to discover the cause of the fire in the biochemistry research laboratory in the pre-clinical sciences building. An electrical fault is suspected.

The fire completely destroyed the laboratory, which was used by six postgraduate students researching eye and other diseases, and all its equipment and research materials.

News in brief

High costs scare students away

Almost a third of the students chosen for places on the Committee of Vice-Chancellors and Principals' bursary scheme for outstanding foreign postgraduates did not take up places last year. As a result, vacancies were left on the scheme for the second year in succession.

Dr Albert Sloman, chairman of the CVCP and of the awarding committee, blamed the high cost of studying in Britain for the "disappointing take-up of awards".

A sharply increased number of offers, totalling 685, produced only 478 students, compared with 319 in 1980. The largest contingents again came from the United States (74 students) and Canada (40).

Biotech unit

A biotechnology unit is to be established at Surrey University to coordinate research and training. The unit, which is intended to be self-financing, will be headed by Professor Robert Thomas, of the chemistry department and will draw on staff from the biochemistry, chemical engineering, microbiology and chemistry departments.

Chop and change

The University Grants Committee has agreed to a Sussex University request to transfer 100 students from arts and social sciences, to sciences, in its 1983/4 student target figures. This makes no difference to its grant.

Stylish exercise

Grants from charitable foundations in Holland and the United States have enabled a group of academics to establish the Community Education Development Centre in Coventry. The centre is intended to influence the style and content of courses and has produced the first issue of a quarterly journal, *Community Education*.

Correction

Accreditation of independent further education colleges is to be taken over by an independent body and not by the British Council, as stated in last week's *THES*. The council will be only one of the organizations represented on the British Independent Education Council, which will start work next month.

UEA considers spreading cuts

by Ngaio Crequer

The University of East Anglia will need to shed 150 posts to reach a 12.5 per cent reduction in expenditure, according to an academic plan being discussed this week.

The resources committee report takes into account the advice given by the University Grants Committee last July. "Nevertheless, we take the unchallengable position that we know this university better than the UGC does, and the resources committee argues for a selective pattern of cuts that does depart from the UGC's advice," he said.

In particular it defends linguistics and drama, which the UGC wanted dropped, and argues that they are both effective and low cost courses. But it proposes discontinuing Russian at honours level after 1982–3.

The report also proposes the absorption of the Centre for East Anglian Studies into other schools. Most schools are given percentage cuts, including social sciences, 18 per cent, English and American studies, modern languages and European history, and education, 16 per cent each, biological 10 per cent, chemistry and environmental 7 per cent each.

The committee explored a number of different models as means of implementing the cuts. The "random vacancy" model was considered crude and impractical and might create problems over the redundancy scheme for lecturers.

The "excision of limb" model would have meant the closure of two large schools and none was an obvious candidate. The "proportionate cut" model would make it more difficult for smaller units. It would also completely ignore the UGC advice, which would cause problems in applying for restructuring money.

Eventually the committee chose a "selective choice" model with the cuts spread unequally over schools, leaving schools a choice in how to distribute resources.

In the preface to the report the vice-chancellor, Professor Michael Thompson, says: "The inescapable fact is that the university will employ fewer people in 1984 than it does now."

Some 50 posts had already fallen vacant and have not been filled. The university wants to achieve all the cuts and avoid compulsory redundancies.

The committee report was being discussed by senate, staff assembly, and with unions this week and final decisions will be made at the end of the academic year.

Getting stoned the Bronze Age way – researchers Laurence Barfield and Mike Hodder of Birmingham University examine one of the most unusual archaeological sites in the West Midlands, the ancient sauna baths Cob Lane Park. The burnt stones found in streams in the area were originally attributed to people living in the period 1500–1800 BC who were thought to have used hot stones, dropped into water, for cooking. Now the lack of ancient cooking utensils has led the two members of the ancient history archaeology department, to propose that the sites are the remains of Bronze Age sauna baths.

Oxford courts industry cash

Oxford University has boosted the status of its liaison committee with industry in an bid to attract more external funds for university research.

The university and industry committee will report directly to the two senior Oxford bodies, the general board and the hebdomadal council, and have a full-time secretariat, and an industrial liaison officer.

The committee has existed for more than 10 years, but met only once a term. Its new status, possibly matched with an increase in its annual budget of less than £3,000, reflects Oxford's increasing attempts, to find new funds to offset cuts.

Dr Graham Richards the committee chairman, said: "We have more priority, and we are becoming more active. We are encouraging departments to increase the university's income from industry.

Major oil companies are a leading source of funds for Oxford research. British Petroleum has put large sums into metallurgy, and Shell has backed a chemistry fellowship.

"We are increasingly approached by venture capitalists looking to back the latest advances. The committee is willing to act as a broker between industry and university," Dr Richards said.

One reform has increased the incentive for departments to seek funds from industry. The share going to the central university exchequer has been cut from 42 per cent, to the first 22 per cent earned.

Oxford, following the lead of American universities, has two successful companies earning revenue, Oxford Instruments and Research Machines Ltd.

Politics 'not a priority'

Welsh student leaders have been told by their conference to concentrate less on national and international politics and more on educational priorities in the principality.

A deeply critical resolution passed by the conference in Tenby singled out a seven day visit to the Lebanon to try to unravel Middle East politics for special condemnation as "absolutely ridiculous" when students were suffering enormous hardships.

The move was spearheaded by the University of Wales Institute of Science and Technology, which has made clear it would disaffiliate but for the activities of the National Union of Students nationally.

Mr Wayne Williams, former chairman of the Welsh Language Society should continue teaching at a school in mid-Wales, the conference resolved.

Mr Williams was jailed last year for conspiracy to damage broadcasting equipment in the campaign for a Welsh language television channel.

In the presidential elections, left candidate Mr John Slater scored a convincing win over the SDP/Liberal candidate, Mr David McBride. Mr Slater, area convenor for north Wales, and supported by Labour Students, Plaid Cymru and some Socialist Workers Party delegates, received 34 votes.

Ministry's 'hawkish' role

by Olga Wojtas
Scottish Correspondent

The Scottish Education Department is being used by the Department of Education and Science to play a "hawkish" role in moves towards cutting students' travel awards, it was claimed at the Scottish National Union of Students' annual conference in Perth.

The SED, Britain's largest grant-awarding authority, had been conducting a survey on travel awards at the Government's request, said student leaders, and they feared this heralded future cuts as the SED has already been involved in several recent saving exercises including imposing postgraduate quotas and clamping down on repeat and transfer years.

At present the SED pays for travel between students' lodgings and institution and three journeys home each year which can amount to more than £300. The SED, said NUS (Scotland), was considering dividing total travel expenditure by the number of students, and giving each student the same funding, regardless of variations in costs.

No surveys of travel awards have been carried out, according to the SED, but a spokeswoman said a number of possible changes were being considered and award making bodies would be canvassed on various proposals.

NUS to isolate Glasgow union

The National Union of Students conference called on all student unions in Scotland to break their reciprocal agreements with Glasgow University Union which has refused to allow the university's Gay Society to affiliate to it. The union should be "totally isolated" to force it to change its decision, conference voted.

* Conference voted to give all its support to action taken by university staff fighting against compulsory redundancies, including strikes.

Students urged to picket over grants

Scottish students should picket any public meeting attended by government ministers to bring attention to their grants campaign, it was decided.

The campaign should be stepped up in the third term, with the union supporting all "non-violent direct action", including picketing and harassing ministers.

The budget had been a "masterful deception" in making people think all state benefits had been increased when grants had been omitted.

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North American news

Pentagon to renew university links

from Peter David

WASHINGTON

America's universities are to rebuild the close partnership with the defence establishment which existed during the Second World War but disappeared during the Vietnam era.

In a major report last week the Pentagon Defence Science Board told Congress that the cooperation of the universities was an essential ingredient of the nation's rearmament programme.

Citing a "new mood" on the campuses, the report – produced after five months' work by a panel of academics and defence officials – says urgent investment in academic science is necessary for the United States to retain its defence posture and eliminate critical shortages of skilled manpower.

It describes as "a serious national problem" the declining ability of academic institutions to educate enough scientists and engineers to maintain a strong technology base.

"The United States lags far behind the Western democracies and Japan, no less the Soviet Union, in general science, in mathematics, and in engineering education," the report says.

"This trend is advancing foreign industries to the point where they rival the United States in some areas of high technology. The long-term impact of the military balance should not be underestimated."

The Pentagon report represents a major victory for the Association of American Universities, which represents the 50 major research campuses in the United States and Canada.

In a submission to the panel at the end of last year, the association claimed that obsolete research facilities and a shortage of graduate students in key scientific disciplines posed a threat to national security.

The Pentagon has now endorsed the association's view and accepted most of its recommendations. These include "real sustained growth" in research funding; the creation of a permanent liaison forum for universities and the armed services and an increase in defence-funded graduate fellowships.

The report, which is to be considered by the House of Representatives Armed Services Committee and the joint chiefs of staff, argues that the funding of basic university science is dangerously low.

It continues: "The research capabilities of the nation's universities have not kept pace with the increasingly sophisticated technical needs of our military defence systems. There is serious doubt about our universities' ability to respond to national security needs.

"Fortunately the universities' attitudes today are different from those of the Vietnam era. The tensions between the Defence Department and the universities, which characterized that era, have diminished and the universities are receptive to positive actions to restore the strength and effectiveness of that relationship and to augment their research capabilities."

The Pentagon's case for more investment in the universities is based on figures which show the relative decline of research and scientific training in the United States.

Between 1968 and 1980, the report claims, research and development funds as a fraction of the federal budget declined 36 per cent and as a fraction of the gross national product 19 per cent.

During the same period, the Soviet Union, Germany and Japan were increasing their spending and expanding the science and engineering component of their labour force.

The report describes the facilities of the nation's leading research universities as being in a state of "advancing deterioration".

It continues: "For more than a decade, the federal government has not supported programmes to upgrade and rehabilitate the university departmental research laboratories in which most federally-supported basic research and training are carried out."

The decline in federal funding for new equipment has coincided with a period when instrumentation requirements in many disciplines has increased dramatically, the report points out. The result has been a serious erosion in the quality of research.

Another problem was the shortage of scientists and engineers in many specialisms crucial to national defence. While the number of doctorates produced by the universities was in decline, there had been a big growth in the proportion of foreigners taking postgraduate science and engineering at American institutions.

"There are many benefits to be derived from the training of foreign students and these should not be lightly dismissed," says a covering letter from the chairman of the Pentagon panel, Dr Ivan Bennett. "The task force recognizes, however, that there are certain risks from a national security perspective if large numbers of defence research and development scientists are not United States citizens."

An important obstacle to improving relations between the universities and the defence department is the need for some restriction on the dissemination of defence-sensitive information, the report warns.

The panel acknowledges "a basic tension" between the requirements of national defence and the free exchange of academic knowledge. It recommends drafting "clear and concise guidelines" for defence department funded research which would not be too restrictive or inhibit the legitimate flow of scientific information.

In another recommendation, the panel calls on the defence department to support university work in foreign languages and area studies, which had suffered heavy spending reductions but were significant to national defence needs.

Cooperation from the universities is vital for the US rearmament programme

Science group holds first meeting

by our North American Editor

The inaugural meeting of the United States White House Science Committee opened in Washington last week with a warning that defence issues would play a large part in the committee's work.

Dr George Keyworth, Presiden Reagan's science adviser, told the 13-member panel of eminent scientists that the committee had been created to bring a wider range of expertise to bear on the Government's research and development policies.

Citing widespread concern about restoring parity with the Soviet Union in defence and science, Dr Keyworth said the administration needed help and cooperation from scientists.

The main part of the committee's first meeting was held in private. Its members, who include leading scientists from universities and industry, were briefed on national security, international affairs and energy research.

But in a public session before the closed meeting administration officials described the range of scientific policy issues on which the committee would be invited to comment.

Mr James Ling, an official from the White House Office of Science and Technology Policy, said the Government was determined to review the performance of the hundreds of federally-owned laboratories.

He said there had been no review of the work of the laboratories, many of which were attached to universities, since 1962. Many had completed their original missions and it was not clear whether the public was still getting a fair return from its investment.

Another OSTP official, Mr Denis Prager, outlined a number of issues in the medical and biological sciences on which the committee was likely to be asked for help.

These included a review of American agricultural research; the development of regulations to protect human subjects in experiments; spending priorities in medical research and the liberalization of patent laws to encourage commercial innovation.

Mr Prager told the committee the administration intended to resist pressure to get involved in the question of the new relationship between the universities and industry, which had developed as a result of new methods in biotechnology.

He added: "There is tremendous potential for revitalizing the relationship between industry and the universities which existed before the Second World War, before it was swamped by the increase in government funding."

The new committee, which is chaired by Mr Solomon Buchsbaum, executive vice president of Bell Laboratories, is expected to meet six times a year. It will become one of the most influential voices on science policy in the United States although it will report to Dr Keyworth and not directly to the President, like its predecessor abolished by President Nixon in 1973.

FBI accused of spying on students

The Federal Bureau of Investigation spied extensively on universities in Iowa from 1957 to 1979 according to official documents obtained by the *Des Moines Sunday Register* under the United States Freedom of Information Act.

A front-page story in the Iowa paper last week pieced together a bizarre record of FBI spying activities recorded in more than 700 pages of bureau documents released under the act.

The documents range from the sinister to the hilarious. They show that in 1970 FBI director J. Edgar Hoover considered all black student groups potentially subversive and ordered bureau field agents to monitor their activities.

In December of that year agents were told to investigate black groups at 13 universities and colleges in the state. In 1974 a sit-in by 50 black students at Iowa State University resulted in an FBI report to the secret service describing the black students involved as "potentially dangerous".

In the late 1960s the women's movement was also a prime target of FBI spying on the campuses, the documents reveal. The *Register* quotes one agency document saying: "It is absolutely essential that we conduct sufficient investigation to clearly establish subversive ramifications of the women's liberation movement."

One conscientious agent at the University of Iowa sent Mr Hoover a detailed "urgent" report on a 1969 demonstration by women students demanding better access to contraceptives from the university's health department.

The documents show that the FBI launched a secret "counter intelligence programme" in 1968 and 1969 against a left-wing student organization called Students for a Democratic Society.

According to the *Register*, the documents released by the FBI were heavily censored to prevent the nature of this counterintelligence programme from being divulged. But other documents indicate the extent of FBI surveillance of the student group.

One agent reported on the identity of students active in the SDS at the University of Northern Iowa and described how car licence plates were used to compile a list of staff and students attending a public meeting organized by the group.

The report continues: "It is recommended that new cases be opened on each person mentioned and active investigation undertaken to secure background data. Contacts will be made with established sources in UNI for further data on each person."

The data by the FBI in its investigation of the SDS, which was an open organization which claims that all its activities were publicized and legal, apparently resulted in some Iowa students being put on the bureau's now defunct "security index", a list of people who could be detained in case of war.

Hoover: thought black students were subversive

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Reagan reverses his tax exemption policy again

The Reagan administration has been forced to reverse its policy again following the president's decision in January to allow private schools which discriminate against blacks to receive federal tax exemptions.

The justice department said last week that it would ask the supreme court to hear the case of Bob Jones University and the Goldsboro Christian schools.

Both claim that the internal revenue service exceeded its powers in withholding charitable status from them under a 12-year-old rule introduced by President Nixon. The case was pending in the Supreme Court before President Reagan's January announcement.

In that announcement the president said the policy had never been properly endorsed by congress and therefore yielded too much power to a federal agency.

He instructed the justice Department to withdraw the case from the Supreme Court and said that all private schools would qualify for tax-exempt status whether or not they operated discriminatory policies.

The president later sent Congress a bill which would have reinstated the Nixon policy, but the bill has made little progress.

Now the Justice Department has been forced to bring the Bob Jones and Goldsboro case back to the supreme court because of a Federal Appeals Court ruling which prevents the internal revenue service from granting tax-exempt status under President Reagan's new policy.

But the Justice Department has now been instructed to argue that the revenue service has no right to deprive tax exemptions because of race discrimination.

Youth scheme starts soon

The United States is to set up a youth training scheme like Britain's Youth Opportunities Programme.

Mr Raymond Donovan, labour secretary, said the programme would be administered by individual states through a $1,800m block grant from the Federal Government.

The programme, due to begin in the autumn, will replace the existing Comprehensive Employment and Training Act under which $2,000m was spent on training in the current year.

Mr Donovan said the new programme would be simpler than the CETA programmes and focus on disadvantaged youngsters between the ages of 16 and 25.

The scheme would consist of training placements in industry and courses run by educational institutions, which would be reimbursed through state grants.

Overseas news

Ministry upgrades research network

from Guy Neave

PARIS

New priorities have emerged for university research following a shake-up in the organization of France's ministry of education. Top of the list will be the strengthening of points of excellence, the development of further capacity and the restructuring of the university-based national research network.

Symbolic of the new dynamism is the upgrading of the branch of the ministry in charge of university research. A director-general, Mr Bernard Decomps, has been appointed by the cabinet.

Until now the ministry has not been particularly energetic in research and though the ministry of higher education sought to be a force in this, it did not entirely succeed.

In France, research policy has tended to be dominated by the big two, the Centre Nationale De La Recherche Scientifique and the National Institute for Health and Medical Research. The hegemony of these two agencies reflected the high degree of centralized control. It also meant that university based research was opposed to research carried out in research institutes affiliated to the CNRS or the national institute, took something of a back seat.

Two major changes are to take place. At policy level, permanent civil servants are to be replaced by a team of researchers in the director's advisory body. The new director's task will be to lead a sustained dialogue with the 160 or so universities and engineering establishments.

In effect, seen from the university's standpoint, this means a considerable reduction in the monopoly of the CNRS in research funding.

The budget of the ministry research directorate will be in the region of F.Frs 200,000,000 (£18m) with the option to draw on an additional F.Frs 800,000,000 (£64m) from an inter-ministerial account.

The purpose of this is not just to increase the ministry's muscle but also to bring up the project funding from this source to a par with that of the CNRS.

Universities are to be encouraged to undertake research into microelectronics and to fill some of the more notable gaps in fundamental research. This is a major departure since it gives greater initiative to the universities independently of the CNRS.

The national research network is to be reorganized to take into account regional needs – a point that was stressed last January at the end of the six months' great debate on the future of science research policy. There are also some hints that the lion's share of the funding hitherto reserved for the Parisian universities will be more equitably distributed to the fund-starved provinces.

Two new research evaluation agencies are to be set up soon. The first will be a national body working independently of the ministry. This is also an important innovation since ministry control through such bodies as the CRNS has tended to be tight in the past. The second will be a so called "inter sectoral agency". Concerned essentially with linking in with the economy it will keep close watch over the detailed work of the research teams.

The ministry of education will have to work hard, however, to recover ground that has been lost to the thrusting ministry of technology and research led by Mr Jean Pierre Chévénement.

Time for a personal touch

from James Hutchinson

BONN

The West German federal minister of education, Herr Björn Engholm, has called on university teachers to spare more time for personal contact with their students. Herr Engholm has reopened a debate on an old theme, since the remoteness of the German professor is legendary.

The minister acknowledged that university overcrowding placed a heavy burden on teaching staff. But he pointed out that the ratio of students to teachers had improved from 47 to one in 1960, to 35 to one in 1980.

In addition large sums of money had been spent on university building and on the promotion of research in recent years – an investment which often caused German university teachers to become the envy of their foreign colleagues. Students were increasingly demanding a more personalised education.

The minister recounted some of the many blessings enjoyed by German professors: professors were civil servants and therefore had job security; the freedom of research and teaching was anchored in the federal constitution; only in exceptional circumstances could professors be moved against their will; no employer regulated their working hours; and they were free to take on extramural work.

University teachers, said Herr Engholm, could do much more to ensure that students no longer felt they were working in an anonymous, even inhuman, system. The professor must acquire the reputation of advisor and sponsor. It was still common to regard professors as distant figures.

Demand for more university staff, said the minister, could not be filled by appointing more and more teachers with life-long civil service status. The government had therefore decided that some professors would be engaged on fixed-term contracts.

● Only around 5 per cent of science professors and *Fachhochschule* teachers in West Germany are women, according to statistics produced by the Federal Ministry of Education and Science.

An article by Christine Schmarsow, of the ministry, in the Unesco journal *Higher Education in Europe* claims that "this striking underrepresentation" is due to the structure of scientific life but also the existence of a university-related "old boy network."

In the decade up to 1978 the proportion of women gaining entry requirements for higher education increased from 38.2 per cent to 44.3 per cent, but fewer women continued to aim for university places. Almost 73 per cent of male but only 63 per cent of female school leavers planned to go to university in 1980.

These Warsaw schoolboys have a better chance of higher education than their country cousins

Reforms spoil chances for farmers' children

Rural students are under-represented in Polish higher education, according to Kazimierz Janic, secretary of the party-sponsored Union of Rural Youth (ZMW).

Addressing the presidium of the ZMW last week, he said that although farmers and their families made up some 25 per cent of the population, students of peasant origin formed a far smaller percentage of the total student body at 9.2 per cent in 1979, 8.9 per cent in 1980 and, in the current academic year, only 8.5 per cent. Even in agricultural colleges, he said, the situation was only marginally better.

The decrease in peasant admissions is related to the educational reforms of the early 1970s, which closed the small village primary schools and drafted all country children into large comprehensives, often several kilometers from their homes without any transport provided. Figures for absenteeism are not available, but are said to be high, especially in winter. Moreover, young teachers are reluctant to take jobs in rural areas, which inevitably attract the less able members of the teaching profession. To offset this, the university admission examination gives additional points to children of worker or peasant origin. This, however, has proved insufficient to ensure young people from rural areas a place in higher education.

The question of preference points arose last year, and the Lodz accords, which legalized the Independent Students Union (now banned), had provided for a review of the system and a revision of admission procedures. Immediately after the accords were signed, the greatly depleted party youth organizations called for the retention of the "points" system.

Last week, the ZMW presidium once again rejected the Lodz formulation, and called, instead, for the points system to be extended to take into account such factors as the conditions in prospective students' schools and homes and their access to cultural establishments. It also called for an entirely new system of university admissions to be introduced in 1982.

How far the MZW demands will be answered by the new Higher Education Bill remains unclear. This Bill, whose passage through the Sejm (parliament) was held up by the imposition of martial law, is still being redrafted, into a form that will almost certainly be far less liberal than that approved by the academics last autumn. According to the new Minister of Science, Higher Education and Technology, Dr Benon Miskiewicz, changes will be introduced into procedures for appointing lecturers, employing graduates and the functioning of donated grants. Some form of self-government for the universities is still promised, but the rector's conference – set up in September 1980, like the Independent Students' Association – has been not merely suspended for the duration of martial law but formally dissolved as hostile to the state.

Wamba detained in Zaïre

by David Jobbins

A Tanzanian university professor is being prevented from leaving Zaïre following his arrest on suspicion of possessing subversive literature.

Professor Ernest Wamba-dia-Wamba arrived in Kinshasa before Christmas to visit his parents, but was immediately detained and held for a month without trial, according to the human rights agency Index on Censorship.

He was conditionally released on January 22, but has to report to security officials in the Zaïrean capital four times a week. Index says he is still unable to leave the country, although no formal charges have been preferred or date for a trial set.

Professor Wamba, who is professor of history at Dar es Salaam University, had flown to Zaïre from the United States, where he had attended a conference of Zaïrean academics. Index believes that papers critical of the government from the conference may be the "subversive" literature said to be in his possession on his arrest.

He is a prolific writer on African history, philosophy and the political economy of the Third World, and has made considerable efforts on behalf of human rights.

Professor Wamba was born in Lower Zaïre, and won a scholarship to the US in 1964. He graduated from West Michigan University in 1968, with a degree in economics and philosophy, winning the Friedmann Award for philosophy. He immediately returned to Zaïre and was cabinet adviser to the Zaïrean ministry of labour, housing and social affairs until 1971.

In 1972 he returned to the US, studying economics and philosophy and teaching at a number of universities including Harvard and Brandeis. He took up his post in Tanzania in January 1980.

High demand for research places

Almost half of all graduates of Swiss universities went on to postgraduate study during 1979 and 1980, statistics produced by the Federal Office of Education and Science show.

The range of courses in the French-speaking universities included training courses administered by the institutions and others jointly organized with industry as well as conventional postgraduate programmes.

Only 1 per cent of those with two degrees were unemployed without the prospect of a job, compared with 2.3 per cent of recent graduates. Over 87 per cent were employed as they hoped, compared with 74 per cent of recent graduates.

Opportunities for postgraduate work have increased to cope both with student demand and the needs of the economy. Almost 2,000 students were engaged in postgraduate study in 1980 out of a total of 3,937 graduates.

Cost of learning rises

Apprehension has been growing among Turkish students about the impending introduction of fees for higher education. Although the state is expected to come to their aid with loans and scholarships, the cost of learning is certain to rise.

The fees will not be more than 20 per cent of the cost of the course, but may place a considerable financial strain on students, most of whom support themselves or are supported by their families. Many may therefore opt for a loan, to be repaid either in cash or through some form of government service. The newly-formed Higher Education Council, under the dynamic if controversial leadership of Professor Ihsan Dogramaci, is still working out the details of the loan system. Fees will first be implemented in the 1982-83 academic year.

Another proposal is an increase in the number and value of state scholarships. But these are still likely to fall far short of what students need to study full-time if they have no other income.

Thus Turks who continue their education beyond the age of 18 will share more directly in the nation's economic difficulties. Most real incomes have declined steadily over the past few years, and this may be one reason why the demand for university places, although still enormous, shows signs of levelling off.

Mexico signs pact with Honduras

Mexico has signed a five year educational exchange pact with British Honduras. The agreement calls for collaboration and exchange of educational material, books, magazines, specialized publications and literary, art and scientific magazines.

It also calls for reciprocal scholarship, interchange of documentary films and audiovisual tapes, and collaboration between cultural radio and television stations.

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In the wake of Salazar

The University of Coimbra, one of Europe's oldest universities, sits perched on a hill above the medieval Portuguese town of Coimbra. Modern buildings rest alongside splendidly ornate edifices.

The university was originally created in Lisbon in 1290, authorized under a Papal bull to teach arts, civil law, canon law and medicine. In 1308, chiefly because of continuous conflicts between the students and the Lisbon population, the university was transferred to Coimbra and given autonomy and special privileges. As in Padua and Bologna, the students were given powers over the academic community.

Politics continued to interfere with the running of the university. It was twice more shunted back and forth between Lisbon and Coimbra: autonomy was abolished: instruction declined and Portuguese students again went abroad to study.

After 1537 when it was installed, the most important creation was the university library famous for its resplendently decorated reading-rooms with precious old tomes filling ceiling-high bookstacks.

With some 10,500 students, Coimbra remains Portugal's premier university, even though it has been overtaken numerically by the universities of Lisbon (about 20,000) and Oporto (15,000). In 1980, 2,578 students were enrolled in liberal arts, followed by science and technology (2,537), law (2,273), medicine (1,815), economy (826) and pharmacy (358).

Further statistics are unavailable as data on students' background is not collated. This dates back to the rule of António de Oliveira Salazar, Portugal's fascist dictator for over 40 years. "Under Salazar, sociology was considered subversive and was not taught in the university," explains Dr Margarida Ramos de Carvalho, professor of philosophy at Coimbra University. "Nor was social science, political science, or psychology. In 1927 schoolbooks changed. They veered sharply to the right, stressing god, fatherland and family. The only philosophy taught was Aristotelian. Marx and Freud were taboo.

A visitor strolling through the sunlit campus, with its students in jeans looking as peaceful and placid as possible, finds it difficult to remember that Portugal's revolution against fascist dictatorship was sparked in the universities. Until 1961, Salazar had total control over the universities. Students still came chiefly from old aristocratic and well-to-do urban middle-class families. Like all Portuguese young men over 18, university students were drafted into the militia, where as a rule they were assigned some innocuous duties for the next 18 months.

In 1961, however, Portugal got entrapped into colonial guerrilla wars. Unlike the rest of the European colonial powers in the 1950s, Portugal had refused to decolonize. As a result, places as distant from Portugal, and from each other, as Goa, Guinea, Angola and Mozambique, euphemistically called the "ultramarine provinces," exploded in armed insurrection. University students were suddenly sent to join Portugal's ill-prepared, badly paid and increasingly disgruntled armed forces at war overseas.

WORLDWIDE

Student discontent triggered massive rebellions, and open politicizing and radicalizing, in Portuguese universities. Communism and maoism surfaced. Portugal's leftist "capitains' movement" of April 1974, which finally brought down the regime, found its ideological base in the universities.

University structures nearly broke after 1975, when everybody who came out of high school was admitted to universities. Classes were huge and overcrowded, professors were overloaded, and, increasingly, inept. It took the Ministry of Education and Culture two years before being able to cope, by providing a preliminary year, and television preparatory courses. To the great relief of university authorities, enrolments have again decreased to manageable numbers.

The 1975 reform law finally broke the Portuguese university's napoleonic mold. Among its chief innovations is the flexibility of curricula, which are now no longer imposed by the ministry but are put together by the university councils in which professors, functionaries and students have an equal say.

Lourenco Anjo Afonso and Francisco Peixe, two final-year law students, explained that their five-year curriculum was put together out of 25 subjects. The first two years were devoted to general disciplines, and the final three to complementary disciplines such as juridico-political and economic courses. Also, they are clearly appreciative of the way Coimbra functions today. "Before 1974, many of today's students simply couldn't have afforded to come here. Tuition was always free, but now we have more and better scholarships, cafeteria meals are subsidized and we have a special low-price supermarket." But they complain that still too little is being done to house students.

In a university town remarkable for its total lack of organized residential facilities, living arrangements vary from the haphazard room rented from a family, or shared frugal lodgings, to the nearly vanished *repúblicas*, an old, nostalgically remembered Coimbra tradition. Groups of students rented apartments from their original tenants and operated as a family: they bough food together, hired a maid to clean and cook, shared the bills and enjoyed the setup immensely, if often somewhat noisily and boisterously. Established *repúblicas* served successive generaations of out-of-towners. In the last ten years, an obsolete but suddenly enforced law against subletting has eliminated all but about 20 of these *repúblicas*. Everyone hopes that the law will be changed so as to permit at least these last few relics to survive.

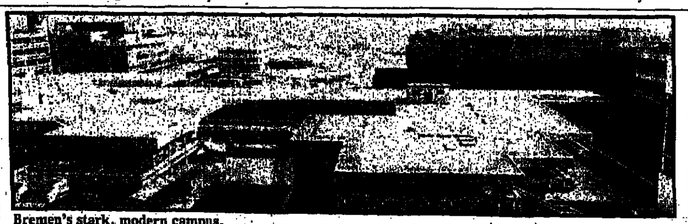
Dr António de Arruda Ferraz Correia is the rector of Coimbra University and a professor of international law. He is proud of the role the students played in the 1974 revolution. But since 1979, he explains, Coimbra's intense left-wing politization has gradually given away again to political disinterest.

In the last elections for academic associations political preferences have again veered to the right, echoing an apparent and, to some, worrisome trend in the rest of the country. Mário Soares, the former prime minister and leader of Portugal's Socialist Party, is expressing a widespread concern when he says that "the lack of democratic spirit in Portugal is due to nearly 50 years of anti-democratic education under Salazar."

Colonel Victor Manuel Rodriques Alves, a minister of education and culture after 1975 and today the spokesman for Portugal's Revolutionary Council, sees only the future. "My daughter is 18 today," he says "She was already in school when the revolution started. I see her and her friends at home. Their customs are different and perhaps a bit more relaxed than I would like, but that's unimportant. This is the first time in Portuguese history that a child born here can get educated democratically from the start, all the way through university."

Fay Haussman

Interior of the richly decorated library.



Bremen's stark, modern campus.

Uneasy peace after the storm

The University of Bremen admitted its first students in October 1971. Ten years later, few people saw much reason for celebrating its anniversary: Bremen is the only one of the new West German universities foundations of the 1960s and early 1970s repeatedly troubled by internal strife and public controversy.

The Bremen model was a bold venture. It was founded to alleviate a shortage of university places in the region and it has been conspicuously more successful than many other new institutions in educationally underdeveloped areas of the Federal Republic. Bremen has over 300 staff who teach more than 6,000 students – a fifth more than planned.

Bremen has failed to convince the general public as well as the academic community that the original concept has been successfully implemented and is functioning smoothly. The impression is widespread that its graduates are not as good as those of the traditional universities or even those of other new foundations and that its research output is inferior.

Not all the criticism is justified. The findings of a survey of personnel directors of large companies and of management consultants four years ago ranked Bremen graduates bottom in terms of successful employment. The validity of the sample and the technique has been refuted.

Bremen was conceived as a teacher-university at a time when there was a shortage of school teachers. Until recently almost half the students followed courses leading to a teaching career. Since the small city state of Bremen itself could employ only some 20 per cent of these most of the graduates had to seek posts elsewhere. A rapidly shrinking market has made them particularly vulnerable to hostile criticism.

The German Research Association, the Federal Republic's foremost research support organization, has not yet granted Bremen full membership and recognition on grounds of lack of academic excellence. Yet the German system traditionally ranks research above teaching and student care which makes it difficult for a new foundation to justify itself if teaching staff's time is devoted to teaching rather than research.

The main criticism is directed towards the original concept of reform. The idea was to break away from the "ivory tower" attitude of the traditional institutions, to be open and democratic and closely linked to modern society, to respond to teaching and research to the demands and needs of that society, especially its working population.

This basic principle was embodied in the university legislation of the *Land*, the university's own constitution, and the examination regulations, all with the approval of the Social Democratic Pary majority of the *Land* parliament, and mostly against the fierce opposition of the Christian Democrats. The Free Democrats (FDP) even fought a regional election on the university issue.

Like elsewhere in the Federal Republic, the dominance of the full professors was abandoned. But in Bremen the reforms went further and introduced a decision-making structure where academic staff, students, and other employees each provide one third of the membership and votes on decision-making bodies.

With it went a reform of the internal university structure: the old faculties were replaced by interdisciplinary schools of study and the academic senate became a very powerful, centralizing body. The central administration, too, was considerably strengthened.

Course structure, content and examinations were drastically overhauled. The emphasis was on social relevance. Thus Bremen introduced an integrated law course, combining the academic with the professional stage. The training of teachers was also totally re-organized. Teachers for all types and levels of schools, primary and secondary, are trained together and courses integrate academic, educational or vocational elements.

The reforms were wholeheartedly supported by the SPD-led government and also by the trade unions. Many reforms corresponded to the SPD's own general goals about democratizing society and increasing equality of opportunity. Perhaps this explains how it was possible that in Bremen the government secured more direct control over the affairs of the university than almost any other regional government in Germany. Thus staff appointments require government approval. But it also means that the university is easily exposed to direct political influence. In turn, internal controversies, which are often politically or ideologically motivated can, and do, quickly involve parliament and government.

There are numerous examples. In 1979 there was the tug-of-war between the university, which wanted for its main computer an American model and the Bremen government which ordered it to cancel the order and buy a German make instead. Or the 1980 episode, when the *Kanzler* (registrar), and FDP sympathiser who has held office since the foundation of the university, demanded the resignation of the *Rektor* (vice-chancellor) an SPD member, much more than a personal feud.

The decision-making structures make it easy for staff and radical students, to force through academic decisions based on political and ideological criteria. Instead of the co-operation, consensus, and pluralism, implied in the Bremen idea confrontation and polarization resulted.

The whole university is dominated by political groups, and has become highly politicized.

The bad image of the university has had one alarming consequence: it provided the three SPD governed *Länder* Hamburg, Hessen and Nordrhein-Westfalen stopped their annual payments towards the running costs. Bremen city state now covers the cost.

The Bremen higher education minister seized the opportunity to propose measures which aim to improve the functioning and the research standing of the university. The minister wants to decentralize internal decision-making in questions of teaching, examinations and appointments.

On the one hand, some functions previously vested in the Bremen government are to be given to the *Rektor*; on the other hand, the central administration and all central institutions are to be reduced in size. The staff posts saved will go towards providing more technical and academic support staff to assist and improve research.

The proposals for courses, are substantial: the capacity to train teachers is to be reduced by a quarter. Certain social science courses will cease while natural sciences are to be strengthened. A small number of new specialized research centres are also to be founded.

The reaction inside the university is mixed, the staff once again has split into two distinct camps: one by and large supporting the SPD proposal, the other vigorously opposing the minister and defending the old "Bremen model".

A slimming down of some of its activities, a more realistic appraisal of its own function and possibilities, and more wide spread links with other academic institutions in all disciplines may yet prove the salvation of the university.

Gunther Kloss

Olga Wojtas talks to the by-election candidates in Britain's best educated constituency

By-election candidates (left to right): Roy Jenkins, SDP; David Wiseman, Labour; Gerry Malone, Conservative; George Leslie, SNP.

What the Hillhead teams think

Education cannot help being a crucial issue in the Glasgow Hillhead by-election. For a large proportion of the electorate works or studies in the tertiary sector.

A favourite statistic is that Hillhead is the best educated constituency in Britain, with the highest proportion of voters with two or more A levels or the equivalent.

The vagaries of political boundaries exclude Glasgow University, whose address is Hillhead, from the constituency. But a quarter of the university staff and many of the students live in it. The electorate has been leafletted by both the university's joint union committee and the National Union of Students, criticising the cuts and the 4 per cent student grant increase.

The Tory candidate, solicitor Gerry Malone, the Scottish National Party candidate, yet George Leslie, and Labour's David Wiseman, a senior community worker and former Scottish executive member of the National Union of Students, all agreed to be interviewed on their views on higher education. Roy Jenkins insisted on giving written answers to written questions.

Mr Malone was the only candidate to endorse the university cuts, although he agreed that Glasgow, with a cut of 10 per cent, has escaped more lightly than most. "I would be absolutely against the cuts if I felt there was going to be any overall longterm decline in the quality of higher education," he said. "But perhaps the higher education system in Scotland was developed unwisely during the 1960s, resulting in duplication. I question whether it is *ab initio* desirable for Glasgow to have two universities. Stirling is a case in point where the cuts are falling hardest, but the implication may be that the setting up of stirling was a decision which wasn't a right one."

Roy Jenkins stated that great, perhaps irreversible damage was threatened to the university system while the population of 18 year olds was at its maximum and job opportunities at a minimum. More higher education was needed rather than less, since proportionately less than half the number of 18 year olds went into higher education as in the United States, and Britain produced a tenth the number of engineers and applied scientists that Japan did.

George Leslie questioned the "economic lunacy" of cutting back university places with a knock-on effect pushing youngsters on the dole and losing the investment in education, and David Wiseman added that the university cuts had a considerable effect on the outside community, to the extent that local shops dependent on university trade might no longer be economically viable. A Labour government should be concerned not only to reverse the cuts, but to try to give working-class people easier access to higher education.

David Wiseman opposed the University Grants Committee trend towards funding of science and engineering. "You have to take account of the needs of society but education is also a more general need and people who feel they should have access to education in a particular area should be given that right." The other candidates felt the trend was a valid one, although Roy Jenkins accused the Government of falling into the trap of concentrating on the most academic group since there was much at the technologist and technician level as graduate and postgraduate. George Leslie feared the trend towards science could discriminate against women entering university, and that modern languages, vital for trade, might be neglected.

The SNP and Labour candidates felt the Scottish universities should come under the aegis of a Scottish parliament and Scottish assembly respectively, and both added that the devolution of the universities had been most strongly opposed by academics with the "misplaced belief" that the UGC would afford them protection from Government interference.

George Leslie said he could see no logic in the Scottish Council for Tertiary Education not considering the universities as part of its remit. Agreeing broadly with its recent report on the tertiary sector's structure and management, he proposed a higher education council running all centrally funded tertiary institutions, with local authorities administering community education.

Further and higher education, said Roy Jenkins, should be administered are financed by a single sytem, either central government or education authorities, "and that system encouraged to cooperate with the university sector to make their activities complementary and comprehensive. The suggestion of further sub divisions within FE has little merit in logic or social implications".

There were dangers in giving regional authorities control of further education finance, said David Wiseman, since institutions were not completely community based.

Gerry Malone proposed leaving the tertiary sector much as it was, and questioned the validity of "making any distinction between areas of education apart from the universities." He criticized the movement towards degree courses as window dressing to attract students.

The Scottish Secretary recently announced a reduced secondary intake to education colleges – projected to be less in three years for all seven education colleges than this year's intake to Jordanhill – and there have been moves towards scrapping the secondary BEd degree. While Gerry Malone said he felt the reduction was "generally fair" in view of falling rolls, the other candidates saw the reduction as a potential threat to the colleges' viability which should be averted by providing more opportunity for in-service training, particularly of remedial teachers.

All the candidates were in favour of an all-graduate teaching profession, a move accepted in principle by the Scottish Secretary, but effectively shelved as too costly. Primary education should not be regarded as second class, said Gerry Malone.

George Leslie proposed a steady move towards an all-graduate profession over a decade, suspending cutbacks in college places by filling them with diplomates whose qualifications would be upgraded through inservice training.

An all graduate profession would help ameliorate the painful contraction of teacher education in Scotland, said Roy Jenkins. "The primary degree must be a full four years, with an optional fifth year for honours. Only thus will it have the standing and prestige which the primary schools will welcome."

Can a budget beat the blues?

Hillhead, Glasgow's only Conservative seat, has been held by the Tories since it was established in 1918.

But the Telephone Survey Research Unit's first wave of interviews showed Labour and the Social Democrats neck-and-neck at 31 per cent, with the Tories down at 26 per cent. This appeared to be the result of unemployment, seen as the major issue of the election. Eighteen per cent of electors have had recent experience of unemployment, and there was a massive Tory defection to the SDP among those unemployed.

But by the second wave, the Tories were slightly ahead with 29 per cent, while the SDP had 28.5 per cent, Labour 28 per cent and the SNP 14 per cent.

Dr Miller noted that the SDP "for a supposedly media inspired party, it is ironic that the SDP is top only among those who read no paper at all, and among the very few who take their news from the English quality press. Every Times reader in our sample intended to vot SDP".

In the third wave of interviews, following the Budget, Dr Miller found the number of intended Tory voters had risen to 30 per cent, with Labour and SDP at 27 per cent, and SNP rising to 15.5 per cent. Asked whether the budget had made them more likely to vote for a particular party, most voters said no: but while Tory voters said the Budget had not changed their minds, 3 per cent of SDP and SDP voters and 2 per cent of Labour voters said they might be more inclined to vote Tory.

Fifty-seven per cent of the survey said the Budget had been good for them personally, 69 per cent said it had been good for the economy, and 68 per cent said the Chancellor had made a good job of the Budget. Sir Geoffrey Howe was thought to be doing a good job by 93 per cent of Conservative voters, 65 per cent of SDP, 55 per cent of SNP and 47 per cent of Labour voters.

Of those who thought Sir Geoffrey was doing a good job, 52 per cent had had recent experience of unemployment within their household, 71 per cent had not, 68 per cent were car owners, 65 per cent were not, 73 per cent were owner occupiers, 48 per cent were council tenants, and 65 per cent rented privately.

Asked whether former Chancellor Roy Jenkins would have done a better job, 36 per cent said yes, 27 per cent said he would have done the same and 37 per cent said he would have done worse.

Discovering the voters who will hold the line

A year ago, Dr Bill Miller (above) of Strathclyde University's politics department was preparing a £10,000 word report for the Social Science Research Council on what survey methods had done and could do for political science.

Among his considerations was the issue of conduting polls by telephone. This had been discredited when it was launched in America in the 1930s and failed to predict Roosevelt's victory. (The Gallup poll also got the results wrong, but not quite so badly.) Dr Miller concluded that it was not an effective method since more than a quarter of British homes do not have phones and results would be biased. However, when he circulated his draft report, it was pointed out that telephone polling has now recovered from its initial setback to become the standard American method, and after additional research, Dr Miller admits he "changed his mind through 180 degrees."

There is still the problem of homes without phones, but Dr Miller estimates that this will have been solved by the end of this decade, and the SSRC should therefore start investing in research now.

He was on the point of applying for a grant when Sir Tam Galbraith, the Hillhead MP, died, and Dr Miller found himself running the first election poll by telephone in Scotland, funded by the BBC's *Agenda* programme, and the Glasgow newspaper *The Sunday Standard*.

Several telephone polls were conducted in English by-elections last year with varying degrees of success, but Dr Miller feels his Telephone Survey Research Unit (TSRU) differs in not necessarily interviewing the person who answers the phone, but taking a random sample of the household. Problems of bias were minimal in Hillhead since 90 per cent of homes have telephones, and Dr Miller made only the minor compensatory adjustment of taking 1 per cent from both the projected Tory and SDP votes and adding the 2 per cent to the Labour vote.

There are considerable advantages to be derived from telephone polling. Traditional surveys are dogged by "clustering", surveys taking place in small areas, perhaps only one street. "This has a very bad statistical effect. We took a random sample of the telephone directory, taking the first Hillhead number in the middle column of each page, and I think 500 of my interviews are worth 750 of anyone else's," says Dr Miller.

He advocates interviewing a large number of people several times, financially viable with telephone interviews when his team of eight can carry out polling which would require 30 to 40 street interviewers. Dr Miller estimates his survey costs a fifth of a traditional poll.

He intends to interview voters four times altogether, and points out that people are unlikely to welcome four visits from a pollster, "especially when going on foot is so expensive that you ask a great many questions to justify it". Between the first and second wave of the survey, only 5 per cent of the initial 550 interviewees have refused to be reinterviewed.

"Reinterviewing is also easier by phone, because if people are elsewhere, you can often get a contact number for them. We've chased people all round Glasgow, which you could do on foot, but not in the three days we do each wave in."

Dr Miller also feels his survey over three consecutive evenings has reliability and control which traditional methods cannot guarantee. He has in effect established an interviewing factory, with the team of eight on BBC newsroom phones while he and a supervisor are present. "We're listening to the interviews and can be sure they haven't been made up."

The team comprises four professional interviewers and four students who can produce equally good results since any problems can be referred immediately to the supervisor, who can take over the call if necessary. Students were initially used in face-to-face polling, but were dropped because they were reckoned unreliable. "They're perfectly reliable if you're standing behind them, and they're good because they're not too diffident," says Dr Miller.

Traditional interviews are also potentially unreliable if they are carried out in the early evening, which might be preferred by pollsters for safety or convenience. "With the telephone, a young female student can go up the most dismal Glasgow closes at ten o'clock at night."

HIGHER EDUCATION: THE RESEARCH FUNCTION

More questions posed than answers found

by Peter Scott

The fourth Leverhulme seminar on the future of higher education, on research, produced the best discussion but the fewest conclusions – a paradoxical result that demonstrates perhaps just how central research is to the mission of the university (unlike manpower planning, access or institutional reform) and also how uncertain higher education has become about the path to follow in a post-Robbins world.

It was also the first seminar in this series to be taken seriously by industry, although still not seriously enough. Perhaps this was because Unilever as much as Leverhulme was the host and the seminar was held at Unilever's international management training centre at Kingston. More probably this was because industrial leaders place greater importance on higher education as a factory of theoretical (but marketable) knowledge than as a trainer of skilled manpower.

This industrial dimension was a problem as well as an asset. For it tended to impose on the seminar a model for the proper relationship between research and society that was derived almost exclusively from the experience of the natural sciences. Indeed, it is possible to be even more specific and say that the relationship between chemistry research (in Manchester?) and high-technology high-quality companies like Unilever or ICI came close to establishing itself as an authoritative paradigm during the two days of discussion.

This emphasis on a commonsensical, one-dimensional connexion between scientific excellence and economic utility was hard on other sciences like physics or biology where the linkages are much more problematical, and harder still on the social sciences with their inevitably multi-dimensional connexion to a sharply contested sense of social utility; and hardest of all on the humanities for which such categories and such language appear to make little sense.

This led to two main difficulties. The first was the implicit caveat entered by the social scientists and by the humanists. They argued, or at any rate murmured, that the idea of relevance had been pushed to often self-defeating extremes and anyway was a slippery concept in large areas of intellectual life; that the research effort of higher education should not be directed to purposes better pursued by other research institutions; and that university research/scholarship was sometimes intended to contest lay values as well as to serve lay needs.

The second difficulty was that while most people agreed that higher education could no longer muddle through with a comfortable confusion of teaching and research it was difficult to achieve a similar consensus about the best new regime. Was it enough to rely on tougher management of priorities or on some "remoralization" of academic purposes which would throw up a new and legitimate balance between teaching and research and within research?

Although the need for both was generally accepted, certain stereotypes lurked. Many of the university-minded vice chancellors or jumbo-colloquia of scientists and scholars on the new French pattern would do the trick. But there was equal scepticism about the validity of attempts to devise either a national or institutional plans for research.

The inevitable result was fudged conclusions. The myth that a good teacher needed to be engaged in research was regarded as unproven, but a strong feeling persisted that a good teacher needed to be involved in scholarship and reflective inquiry. Similarly it was felt that the UGC should support teaching and scholarship while the research councils assumed greater responsibility for "frontier research". At times semantics seemed to have substituted for policy.

The seminar shied away from the difficult question of how research in one discipline could be judged against that in another, especially in the treacherous middle ground where purely academic considerations have been subordinated to some extent to supra-academic needs but the absolute supremacy of the lay customer has not been conceded. Too many of the tricky issues arise in this borderland of research.

Nor did the seminar effectively tackle the most basic question of all – how much research do we need? The teaching component in higher education can be fixed, however approximately, by student demand. The research component seemed in contrast to be the almost arbitrary gift of some political *deus ex machina*. Perhaps it is at this point in the policy debate, rather than in the setting of priorities, that a French-style national colloquium of scholars and scientists with its remoralizing force might be most useful.

But if this fourth Leverhulme seminar failed to produce clear conclusions about research policy, it did succeed in measuring in an impressive way the difficulty of the questions that must eventually be answered.

Leader, back page

Who'll put the fizz into research?

Research can be a nebulous topic to analyse. The closer the participants come to formulating propositions, the more the proposition seemed to disintegrate in the face of a welter of qualifications. The seminar did however emerge with a set of propositions discussed in some detail during the final three sessions, even if they were eventually left somewhat vague, perhaps to be incorporated loosely in the final seminar report.

The seminar revealed a series of methodological difficulties in discussing and analysing research. First, there are many different types of research. One taxonomy distinguishes between *strategic* research to deal with policy questions, *tactical* research to deal with short term problem-solving, and *basic* research to deal with long term, blue-sky, investigation. Second, research in the natural sciences cannot easily be discussed in the same breath as research in the humanities or the social sciences. Third, it is difficult if not impossible to disaggregate research in terms of time spent, effort involved, and cost incurred. In one sense, research could be said to take up 24 hours a day in addition to normal research and scholarship, involving reflective industry, was made.

The simplest, and perhaps most significant, idea to emerge after three days of discussion, and one which received wide assent, was that good undergraduate teaching did not require a teacher to be simultaneously a good researcher. From this assertion flowed further propositions that the system of funding research in higher education could be separated from the system of funding teaching. A simple notion but it contains profound implications for the way funding, currently based on student numbers, might be reformed. Other more general and agreed conclusions were that by the 1990s there should be more rather than less research in the higher education system; management structures in the institutions needed improving to allow change, and the pluralism of the system needed protection.

The major propositions and themes discussed were as follows:

- The traditional link between teaching and research should be reviewed. Logic and evidence showed good teachers need not, simultaneously, be good researchers, although good teachers should be engaged in scholarship and reflective inquiry. If that held good, funding bodies and higher education institutions should disentangle their criteria for allocating resources to teaching and to research. This would greatly increase flexibility in supporting research, and release lecturers to concentrate on research or teaching as appropriate at different times. The American experience of many first-degree students successfully studying in institutions with no research activity was quoted in support of this. However it was acknowledged that the usual yardstick for making all academic appointments was still the research record, and there were dangers in too rigid a separation.
- The notion that higher education institutions should develop their own internal research policies appeared attractive, but would also be distressing and difficult. Attempts to produce the right mixture between basic, applied, and consultancy research was certain to be deeply divisive as interested parties battled for resources. Pressure to follow tradition and spread the funds equally might be hard to resist. A more serious difficulty would come in judging research proposals, with the peer review system, used by the research councils, replaced by inter-discipline assessment and always suspect and open to question.
- A national research policy which established priorities for the allocation of the science budget seemed logical and to fill a vacuum in Britain. This would require widespread debate and consultation between higher education institutions, the University Grants Committee, the research councils, the scientific community, and principal users of research in industry and Government. If researchers tend to hunt in packs then a central directive could send them all in the right direction. Government departments and industry could make plain their areas of interest for *strategic* research. But there was considerable dissent: disagreement over the mechanics, the purpose, the status, and the usefulness of such a policy were raised, and left unresolved.
- Any national research priorities would need to be matched with research policies of individual higher education institutions. How this would be achieved was little discussed, but the problems were clear: how would the autonomy of the institutions be infringed, what sanctions would there be to follow national guidelines, and how much should institutions specialize in research areas. It was also not clear who would finally put the "fizz" into research, taking risks in supporting certain research programmes which did not promise obvious and certain results.
- The dual support system could be modified, with the UGC in future responsible for supporting teaching, scholarship and reflective inquiry, and the research councils taking on greater responsibility for funding basic, or frontier, research. It was agreed that at present the UGC, which provides a sort of research floor for university departments, is engaged in too little consultation with research councils, who provide grants without much scrutiny of the level of the research floor. The radical implications of such a reform were acknowledged, and there was agreement that "the knobs of the system needed to be twiddled" to get better results. But there was no sense of how such changes might be approached. Polytechnics in any case are outside the dual funding system, and would not be affected.
- There was agreement that industry and higher education needed to strengthen their lines of communication. Universities for their own benefit needed to find ways of attracting more research funds to compensate for Government cuts. Incentives allowing university departments to retain more of the funds they earn should be developed. At the same time industry was clearly unwilling to fund what it might consider mediocre research in academic institutions. Industry might take certain risks, but it wanted to support the best research, and research that might prove "useful". Here the different problems of research in the natural sciences and the social sciences were thrown sharply into relief. On a different note more exchange schemes to allow researchers to switch between industry and academe were needed. This would encourage links between the two sectors, and help in some way the career problems of researchers.
- The relevance of the current three-year format of the PhD was raised without ever becoming an issue in its own right. The importance of proving one's research capabilities by indulging in some "coal-face" work was agreed. But there was less agreement on whether a postgraduate needed three years to prove it, or whether a PhD qualification was appropriate when the academic labour market was shrinking rapidly. Should the PhD be modified more deliberately, and should there be more comprehensive assessment of the suitability of a student for research, particularly motivation, were questions left unresolved.

No propositions emerged from the seminar unscathed by counter-arguments, or unfettered by qualifications. That the research system was not working as well as it might however was agreed, with the French indicative approach held by some as a target to aim for.

Paul Flather

Question of balance between institutions

Professor Michael Gibbons from the University of Manchester discussed in his paper the functions of research in institutions of higher education. A summary appears below.

The objective of this paper is to clarify certain of the strategic choices facing universities and polytechnics in the UK in relation to their research function. To this end, it has been necessary to dwell on a number of factors. In the first place, the university in carrying out research contributes to the objectives of several other social sub-systems; principally, the national research, the educational, the economic/industrial and the cultural sub-systems.

In carrying out their research functions the institutions of higher education contribute directly or indirectly to each of these sub-systems and, at any given time, a balance is struck in terms of effort devoted to fulfilling the various functions. In this way, a role for the universities or polytechnics is established.

It is suggested in this paper that the combination of a number of external factors is having the effect of changing the balance among the various functions and that in arriving at a new balance the universities and polytechnics will be required to consider seriously what sort of institutions they want to become. In sum, the institutions of higher education are faced with making strategic choices.

To highlight the context in which choices will be made, we have focussed on a structural model of university/polytechnic funding in which three flows are involved: general university funds from the DES or local governments (Flow I); funds for research grants and postgraduate education from the research councils (Flow II); and funds from other sources (Flow III). We have tried to indicate that, if the existing balance of higher education research functions is to continue, then there are certain relationships between the level of the three flows which must be maintained.

In particular, the operation of the dual support system requires that Flow I and Flow II complement one another and, if the current situation makes this difficult or in some cases impossible, then some hard choices may have to be made. To insist on the theoretical validity of the principle of dual support in the full awareness that the basic conditions for its successful operation are unlikely to be fulfilled seems an odd way to develop an effective research capability in the higher education sector.

A third element in the analysis is related to the emergence of the international scientific community.

For their part, the research councils are committed to developing and maintaining Britain's national capability in scientific research and, as we have seen, by far the largest part of this research is going on outside, but not necessarily independently of, the universities and polytechnics in council-funded units or establishments. The question at least must be asked whether, given the structure of contemporary science, units, establishments or other forms of peri-university organizations are not better adapted to the goal of maintaining the position of UK science internationally.

Mention has also been made of the recent efforts, particularly in the SERC, to orient research and post-graduate training specifically towards the needs of industry. In a time of decreasing budgetary growth rates, these efforts are bound to constrain further the resources available for activities whose principal aim is to do good science as dictated by the specialist group.

For the most part, the institutions of higher education act as a kind of holding company for a diverse range of research activities; though perhaps in this regard Cranfield Institute of Technology is a significant exception.

In the current context of contraction in the higher education sector, the universities and polytechnics are faced with serious strategic choices as to *what* research is worth doing, how much research is to be carried out, by whom and for whom. At the present time, there is little in the way of structured policy alternatives within which they could examine the options before them. In the paper three *possible* scenarios are considered:-

(i) A Triple Support System in which the universities and polytechnics explore a variety of income-generating schemes in order to finance both academic developments and research.

(ii) A Single Support System in which a research budget is voted by the DES as an integral part of the university's or polytechnic's academic plan. The universities may still opt for support from the SERC and SSRC but they need not do so.

(iii) A Variation on the Dual Support System in which it is assumed that the research councils have evolved, in conjunction with government and industry, a set of strategic research priorities with which universities and polytechnics as *institutions* may wish to associate themselves.

The discussion is based upon a number of pre-suppositions about the existing situation in the higher education sector, the scientific community and the research councils and about the likely impact of social and economic trends upon this situation.

Firstly, it is assumed that the universities and polytechnics will continue into the 1990s to function *primarily* as teaching institutions. It is in relation to supply and demand projections for post-secondary education and training that the budgets in the institutions in the higher education sector will be determined.

Secondly, it is presumed that economic pressure will continue to make it necessary for any UK government to exercise tight control over the growth of public sector borrowing. While it is agreed that universities and polytechnics play a vitally important role nationally, they will *not* receive special treatment and will consequently be required to trim their operations in line with the cuts imposed on other areas of public spending. It is further assumed that the current round of cuts is but the first in a much larger programme to cut the higher education system down to a more economically efficient size.

Thirdly, the contraction of higher education will be such as to force on the universities and polytechnics some degree of specialization. This will be necessary if the traditional solidarity of teaching and research is to be maintained.

Fourthly, specialization within and between universities will be severely hampered because the universities *qua* universities have no research policy and are not directly involved in the national deliberations about priorities for research. In addition, science within the DES enjoys a relatively low priority in a department devoted primarily to education.

This, coupled with a perception of universities and polytechnics as primarily teaching institutions and a declining resources base provides some of the ingredients of a recipe for decline of the research function of the higher education sector.

Note that it is because the research function is not sufficiently differentiated institutionally within the higher education sector that it makes it likely to suffer most when resources are declining. Academics have to respond to the more insistent pressures of teaching; the students are there, they must be taught.

We conclude, then, that universities and polytechnics must begin to develop their own research policies not only to protect research but also teaching and scholarship.

Time and place for the arts

Professor David Daiches of the University of Edinburgh discussed the functions of research in the humanities. His summary of his paper appears below.

Organized research into the humanities is a very modern activity. The old type of "gentleman and scholar" gave way to the researcher as professional academic only in the present century. The development of the PhD at universities (under German and American influence) was part cause and part effect of this. The consequences of the establishment of the PhD as a passport to the academic profession in the humanities have been far-reaching, research being now often undertaken as a necessary chore, with the subject chosen by a supervisor, rather than out of a passionate love for the subject.

Analogies with research in the sciences have helped to foster views of the importance of humanistic research, but these analogies are often dubious. Revaluation rather than extending the boundaries of knowledge is often a more fruitful objective for the academic humanist, and while this is not often recognized it is also true that in many quarters research of a rather narrow kind is foisted on those wishing to move up the academic ladder with the result that much of what is produced is trivial or meaningless.

There are of course areas in which the humanistic researcher can produce valuable new knowledge, but in the humanities these are limited and on the whole the most significant work in the humanities is less likely to be the discovery and application of new knowledge than revaluation and re-interpretation of what is already known. The most fundamental kind of revaluation and new interpretation is that into the function of humanistic study as a whole, its role in society, its meaning in terms of people's lives and the values we seek to encourage in living. A major function of research in the humanities is the introspective one of seeking to define the nature and significance of its own subject. As technological advance increases time for leisure, the place of the arts in a largely leisured society demands urgent consideration.

There is also the question of the transmission of the "high culture" of the past. This traditionally has been a prime object of education, but in recent times both its possibility and its desirability have been called into question. What are we to say to those who argue that what they call the "elitist" high culture of the past (in literature, music, art, etc.) is no longer of concern to society today and that it is only the vested interests of certain academics that keeps it alive? This question is bound up with the question of "cultural memory" and its importance in any society.

An important growth area in humanistic study is inter-disciplinary studies. In many areas specialist work (by e.g., linguists, literary scholars, historians, psychologists) has gone as far as it can without becoming involved in other fields. The answer to increased specialization in humanistic research with the narrowing of perspective that it brings is the exploration of interrelations which brings with it the discovery of new subjects.

Among individual subjects in the humanities, philosophy is a special case because it does not have a developing subject matter. In literature, history, etc., as time goes on new material for study emerges, but on the whole the philosopher worries over the same body of problems faced by his predecessors. Nevertheless there can be new knowledge developed in philosophical research, as in the more adequate definition of the intellectual context of earlier philosophies, in the relation of philosophy to other subjects (mathematics, sociology, biology, politics, etc.), and in the relevance of philosophy to problems of modern social, moral, political and legal life. The recognition by some philosophers that they must master some other discipline or body of facts in dealing with issues such as euthanasia, minority rights, etc., is helping to break down older views of the autonomy of the subject.

In literary research, both bibliographical and critical approaches to editing have recently proved fruitful and continue to suggest valuable new work.

With the development of the EEC and of multinational companies the importance of a knowledge of foreign languages – as a working tool rather than for literary enjoyment – is greater than it has ever been, and Britain is still under-equipped here.

The training of research students in the humanities in the methods and techniques of research has only belatedly developed in this country, and there is room for a great deal of further investigation into how this could and should be done. The increasing sophistication of scholarly and critical methods makes this all the more necessary. Such training in universities belongs research students together, an important aim in humanistic research, where the researchers tend to be isolated in a way they are not in the sciences. Institutes of Advanced Studies like that in Princeton are almost unknown in Britain (there is in fact only one, at Edinburgh University, and it is very small). They can be of great importance in bringing scholars and critics together and enabling them to explore areas where their work can be mutually illuminating.

Masters as servant of the market

Dr Wendy Hirsh of the Institute of Manpower Studies based at the University of Sussex discussed the postgraduate training of researchers in her paper. Her summary appears below.

The present system of postgraduate training is based on the questionable, but rarely questioned, assumption that the best training for academic research is three years spent in conducting one major piece of research and writing a thesis. Even setting aside the short-term crisis in academic employment, it seems unlikely in the foreseeable future that large numbers of PhD graduates will find permanent employment in universities or polytechnics. The dwindling academic labour market has already led increasing numbers of postgraduates to seek careers in industry or the public sector. Others have embarked on a series of short-term research posts in the hope of eventually obtaining a permanent academic job.

These employment problems alone would have been enough to force some rethinking of the function of postgraduate training. However, this process has been accelerated by the more general pressure on the whole of the educational system to respond to the perceived manpower needs of industry.

The resulting attempts to relate postgraduate training to jobs outside the higher education sector have often been based on mistaken notions of the labour market. For example, PhD studies in engineering have been strongly encouraged, particularly those with research topics of potential application to industry. There is, however, little evidence that industry is particularly interested in PhD engineers, and they are often employed in jobs they could have gained with first degrees.

In addition to the problems resulting from misunderstanding the labour market for postgraduate training, policies have also ignored the motivation and attitudes of the students themselves. To take again the example of engineering, it seems that students embark on PhD study either out of strong intellectual interest or out of desire to defer industrial employment. It is hardly surprising therefore that the CASE scheme has found it difficult to attract students of high quality.

In addition to the primary functions of postgraduate training, the universities have come to rely on research students for a major contribution to research output.

Judged by any of the criteria so far mentioned, much postgraduate training is clearly a failure. Many masters courses have been criticised for poor teaching quality and the completion rates of PhD students are appallingly low.

There is however, a distinct risk that such discussion of the quality of postgraduate training will divert attention from the more fundamental confusion as to its purpose. This confusion is a direct result of trying to adopt a manpower planning approach to postgraduate training. The "looseness of fit" pleaded for in current policy is merely a verbal red herring to avoid any rigorous examination of either the assumptions behind or the consequences of such a policy.

Subjects without any specific industrial labour market are by definition excluded from this manpower philosophy and therefore apparently from the debate on postgraduate education. Either the PhD in many subjects (including most of the humanities) will cease to exist, or we will continue to rely on students who produce some research and then go off to start on some other career when their hopes of permanent academic employment are thwarted. Alternatively we pray for stable enough policies in the higher education sector so that PhD output can be roughly matched to likely academic employment. At present this seems a forlorn hope.

In subjects where research jobs and other kinds of employment exist outside the universities and polytechnics, different issues emerge. They concern the extent to which the PhD could or should be adapted to serve the dual functions of training for academia and for industry. Even if the PhD can be geared to industry's needs it seems unlikely by its very nature to attract students with a strongly industrial orientation. Specific labour markets need to be understood much better, if the current range of PhDs, masters degrees and shorter coures are really to be geared to industry's needs.

Deeper examination of the manpower needs of industry casts doubt on the wisdom of this whole line of thought. Firstly, industry tends to express its manpower needs in very specific skill terms which are closely related to particular jobs. We then make the large assumption that educational programmes should also necessarily relate to these specific skills rather than to broader and more durable skills.

The second assumption we make in relation to university training is that it should relate to a student's first job in industry. The argument against matching education to a narrowly specific set of job related skills is reinforced when one remembers that industrial researchers have careers not single jobs.

The third assumption on which present policy rests is that industrial employers can be expected to make consistent and reliable statements about current and future needs for highly qualified manpower with various types of skills. Although employers are gradually learning to improve their own understanding of manpower issues, many would am sure shrink in horror if they saw how literally their views are sometimes translated into educational policy.

None of the assumptions about industrial employment which form the foundation for current policy on postgraduate training stand up to serious scrutiny. Perhaps it is time to seek more realistic assessments of the roles which high level study can play, rather than basing policies on poor labour market information and wishful thinking.

HIGHER EDUCATION: THE RESEARCH FUNCTION

Breathing space provides time to think of a strategy

Better ways to increase the research output at universities, and link applied research activity in higher education to national needs must be found, Dr Cyril Smith, secretary of the Social Science Research Council, argued in a paper presented at the seminar.

Dr Smith, presenting his personal views, tentatively sketched out two strategies for improving the use of the national research effort: setting up some form of forum where national needs could be spelt out; and a more flexible combination of research, scholarship, and teaching in higher education.

In his paper he first provides a wide ranging review of the roles of the main agencies of research funding – the University Grants Committee, the research councils, and Government departments – and the response of the scientific community to funding opportunities, concentrating on the social sciences.

He concludes that it is difficult to talk of "a funding system". Foundations and the business community, *which may become more* important in the future, are assigned only minor roles.

Dr Smith says the UGC and the polytechnics have been preoccupied with the problems of creating more capacity to absorb more students. "They have not given a great deal of thought to the research capacity they were creating."

Government departments meanwhile, under pressure of fast moving political events, have acted quickly to satisfy their short term needs, and the SSRC, which might have acted as the broker for change, or at least the central source of information and *advice, has not been able to establish* its right or power to do so. This is because it is a relatively small organization, relying on moral persuasion rather than a clear Government blueprint to achieve its ends.

With the first wave of development of social science research in Britain now clearly receding, and unlikely to revive immediately, a breathing space may provide the right opportunity to think through a strategy for future research development, Dr Smith argues.

He describes in detail how the social sciences have progressed as disciplines since the 1950s, advancing particularly between 1965 and 1975. But since 1979, for example, government departments have reduced their research commissions by more than a third, and the SSRC budget has been cut by one quarter.

But any future manifesto for social science research must be more realistic. Dr Smith notes that very little progress has in fact been made with the list of problems set out by the Heyworth Committee when recommending the foundations of the SSRC in 1965.

Dr Smith argues it is time to abandon the simplistic notions of social engineering which guided that committee, because research can do much besides solve social and economic problems directly. For example it can legitimate political solutions to social problems, or establish valid criticism.

"More often than not it is the analysis, the interpretation, or the tentative explanation which is valuable to those who have to make decisions." Such enlightenment is an important element in the popular culture of a modern democratic society, he continues.

"When social science is looked at in this way – when it becomes difficult to distinguish the pure from the applied, scholarship from research, the intrinsic from the instrumental, it is difficult to conceive of any tightly articulated system of research funding geared to useful ends."

But acknowledging all the difficulties, Dr Smith does point to two possible ways of improving the research effort. First, create a national forum perhaps involving all the participants in the National Economic Development Organization (NEDO) to come up with a national research policy.

This would still leave many problems unresolved, for example how recommendations from such a forum could be turned into resource commitments, and how abstract discussions could be prevented from becoming remote or ill-informed.

A second strategy would be to challenge the traditional relationships between higher education teaching, research, and scholarship. "It is about time that the convention of 10 per cent of a university teacher's time for research should be seriously questioned," he writes. "How could it be thought to apply equally to all subjects in a university? And to all individuals – the energetic and the lazy? And to all levels of student numbers?".

More variation in university contracts, for example creating research lectureships with little teaching load, and reducing the teaching load of research grant holders, could all boost the research effort.

Dr Smith concludes that "something must be done" to create real incentives in higher education to increase the level and quality of research activity, especially at a time when promotion prospects are extremely limited.

Preserving quality and vitality

Dr Ray Beverton, formerly of the Natural Environment Research Council, and **Dr Geoffrey Findlay** of the Science and Engineering Research Council, discussed in their paper funding and policy for research in the natural sciences. Their summary appears below.

The paper has two main aims: to analyse available data on the support of universities and, as far as possible, polytechnic research over the past 15 years; and to consider the requirements and options for preserving the quality and vitality of that research into the 1990s.

The recurrent block grant to the universities from the University Grants Committee comprises about 60 per cent of their total income covering most of the costs of teaching, administration and general services and part of the expenditure on research. Funds for research from external sources, such as research councils, trusts, foundations etc, do not in general cover the basic running costs or equipment, but only the additional costs of a particular approved research project, thus forming a research subsidy on the floor of support from the UGC – the well-known dual support system.

University research expenditure is calculated by summing appropriate proportions of departmental expenditure on the science in question, external funding for that research, specialized support, capital facilities, and general overheads. The most significant variable is the proportion of staff *time* spent on research as opposed to teaching and other duties.

In the absence of any better guideline the proportion adopted in the paper is the figure of 50 per cent defined originally from the Committee of Vice-Chancellors and Principals' "Chamberlain diary" exercise undertaken in 1969/70, and this is assumed to have remained constant, although the evidence suggests that it has declined. The resultant expenditure figures are adjusted for inflation by the Tross Brown revaluation indices employed by the CVCP and the Government Retail Price Indices.

The general picture to emerge from an analysis is one of steady growth, albeit at a decreasing rate, in overall and research expenditure from 1965 to 1973/74. Research expenditure then declined, the fall in the one year to 1974/75 is estimated in real terms at £33m or 12 per cent mostly in capital equipment. For the following four years the level fluctuated, but only in 1978/79 did it rise significantly to a level probably slightly higher than the 1973/74 peak.

Both staff and student numbers increased throughout putting further pressure on the system. Mobile reserves – mainly capital for equipment and day-to-day running expenditure and maintenance were diminished to sustain the inescapable commitments of staff and fixed assets, thus weakening the resilience of the system. These changes would have been sharper still were it not for the fact that external support in the form of grants and contracts remained steady.

For the last two years 1979/80 and 1980/81, for which no comparable data is available, the inference is that conditions have continued to deteriorate where manoeuvrable resources remain ie in staff dependent costs rather than salaries, and in maintenance and daily running expenses, and the general level of laboratory equipment and services further weakened.

In the terminology of population dynamics it is suggested that the events described were symptomatic of a population whose growth rate is not subject to the negative feedback processes which normally control it, size, and yet whose resources of food and space are strictly limited. The onset of great fluctuations in size and the mobilization of reserves, which happened in the university system in the second half of the decade, are characteristic of a population under stress for this reason.

Analysis of the 1981 cuts in university expenditure suggest that the proposed overall reduction of 15 per cent would bring the universities back to the level of expenditure obtaining in real terms, in 1970/71, while nevertheless having to cope with some 21,000 undergraduates and 2,000 postgraduates more than the number in the system in the earlier year.

The implications are clear. The cuts were far from uniformly distributed, ranging from zero in a few cases to over 40 per cent by 1983–84 in one case. The UGC made explicit judgments about the overall direction of university science – by broad subject area – and has used as objective criteria (size of department, quality of student intake etc) and, presumably, some value judgment to discriminate between academic institutions and their departments.

While still too early to draw any firm conclusions on the way universities will adjust to their various cuts, the outcome does seem likely in most cases to be more egalitarian with hardship widely shared than it was the start and perhaps more than the UGC intended.

Turning to the future, the paper offers the conclusion that the future of universities' scientific research depends more on the *explicit* recognition which Government and UGC are prepared to give. It is suggested that the UGC's approach to the administration of the 1981 cuts may mark a turning point, in that it:

- gave stricter target student numbers than hitherto;
- conveyed more explicit advice to institutions;
- gave more overt recognition to research.

It is further suggested that the requirements for support of teaching be more clearly distinguished from those for research. The conclusion that there is a national need for trained manpower in a particular subject should not carry with it, of necessity, the assumption that there is a commensurate need for research in that subject and *vice versa*. The needs of the two functions should be addressed separately with the implication that in some cases the hitherto "sacred" (though often previously challenged) link between university teaching and research may need to be weakened if not broken.

That the UGC arrived at its distribution of the 1981 cuts following consultation with the research councils implies that it took account of the council's *selective* support in arriving at allocations to particular institutions. This effectively amounts to a loose application of the principle of "resonance", whereby the level of central funds to a university or department is positively related to the amount of research income which it can generate from outside sources.

It is argued that confidential UGC consultation with the research councils is insufficient, and that a much wider, public, debate is needed, based on fuller and more up-to-date information than presently available. While no existing body can provide the forum, the UGC, Advisory Board for the Research Councils, CVCP and the Royal Society should each have a role to play in promoting the broad consensus required.

Given such a consensus strategy, the deliberations behind the UGC's executive decisions on individual allocations would probably remain confidential. On the other hand the *criteria* on which they are based could with advantage be made public, as guidelines and incentives to institutions on which to base their future claims for resources.

Finally, can the traditional unspecific block grant to universities prove adequate to the task of implementing any national policy for the development of university research even if such a policy derives from a publicly debated consensus? Experience to date suggests that there may be little alternative to the UGC to earmarking at least some portions of its recurrent grants to universities. Such an arrangement does, of course, imply a different kind of relationship between the universities and the UGC in the future. The universities will have to be prepared to accept a greater degree of involvement of the UGC in their affairs while the UGC and particularly its permanent staff will need to be strengthened

Customer-contractor principle comes under criticism

The pressure for "relevance" which has built up since the 1960s is too extreme, **Dr Stuart Blume** of the London School of Economics argued in his paper on "The Research Function of Higher Education: a Framework for Analysis."

He pointed out that by international standards research within higher education was only a small component of the national research effort, and that Britain undertook rather little fundamental research contrary to common belief.

In particular Dr Blume criticized the customer-contractor principle enunciated by Lord Rothschild because it did not admit that research might be useful in the absence of an existing customer. "The concept of utility, of applied research, which has dictated the allocation of government research funds (and a significant share of research council funds too) is therefore logically dependent on the *existing* structure of industry and the *existing* structure of public administration," he added.

Under present policies there could be no "need" for applied research that was not expressed as customer "demand", he emphasized. The conservative effect of this view militated against strategic applied research and against radically new technology like biotechnology.

Dr Blume added: "Relatively speaking, the pernicious effects of this conservatism are more serious by far in the social sciences. For here funds allocated on this (customer-contractor) basis have come increasingly to dominate research; and will do so all the more as the SSRC seeks to step closer to Whitehall.

"In other words social science research has been pushed increasingly to 'respond to the identifiable current interests of existing administrative structures. This has inevitably led to a relative undervaluing of research which would, for example, have relevance only within the context of a more integrated approach to social policy, planned within a longer-term perspective."

The second main point made in Dr Blume's paper was that perhaps too much was expected of research in higher education, which after all amounted to only 10 per cent of the national research effort. University research was now called upon to do many things, to perform a complex variety of functions – for the educational process itself, for industry, for government.

He admitted that diversity should be encouraged. There was plenty of room for short-term problem-solving for local industry, for applied studies by social scientists on behalf of local social services department, but such work should not be at the expense of research activity that in the longer term was likely to contribute most to Britain's economic, social and cultural development.

Dr Blume insisted that higher education had a particular research role to play. Higher education, along with industry and government, should at last begin to think about precisely how the special talents contained in higher education could best contribute to the national effort.

He identified three difficulties for research in higher education during the 1980s. First was the problem of an aging academic profession which would become less flexible in its research interests and so less willing to move into new fields.

Second was the obsolescence of equipment as a result of the growing inadequacy of the UGC's equipment grant. This would mean either that some line of research would be closed off entirely because the advanced equipment necessary to undertake them was not available, or that research would become less efficient because of delays and shortages.

Third was the decline in the training of postgraduate researchers. The drift towards advanced courses rather than research among postgraduates and the increasingly dominant view given to a narrowly conceived "demand" in determining science policy had undermined the basis for an effective and independent research system in higher education.

THOSE WHO TOOK PART

Chairman Mr Kenneth Durham, Convenor, Dr Geoffrey Oldham, University of Sussex; Speakers, Dr Ray Beverton, formerly Natural Environment Research Council, Dr Stuart Blume, London School of Economics, Professor David Dickson, University of Edinburgh, Mr Geoffrey Findlay, Science and Engineering Research Council, Professor Michael Gibbons, Director, Programme on Science, Technology and Society, University of Sussex, Dr Cyril Smith, Social Science Research Council.

Other Participants: Sir Geoffrey Allen, Unilever, Professor John Ashworth, Salford University, Mr Jack Baddeley, Department of Health and Social Security, Professor Ian Beardle, University of Southampton, Professor Lewis Evans Broadbent, London Institute of Education, Dr David Clark, University of Exeter, Mr Harrison Dodd, National Environment Research Council, Dr Peter Dunleavy, The London School of Economics, Professor Sir Hermann Bondi, Natural Environment Research Council, Dr Peter Gluckman, University of Auckland, New Zealand, Professor Sir Hermann Bondi, Natural Environment Research Council, Dr Peter Gluckman, University of Auckland, New Zealand, Professor Sir Hermann Bondi, Natural Environment Research Council, Dr Paul Hallett, The Times Higher Education Supplement, Professor Michael Hart, King's College, London, Alan Hall Hoffman, *New Scientist*, Professor Raymond Hoy, University of Aberdeen, Professor Alec Jenkins, University of Sussex, Professor Maurice Kogan, Brunel University, Dr Bernard Langley, ICI, Dr Peter Lawrence, Manchester Polytechnic, Dr Robert Lindley, Natural Environment Research Council, Professor Hanfield Mellors, Mr Brian Oakley, Science and Engineering Research Council, Dr Jennifer Platt, University of Sussex, Dr Geoffrey Pyatt, Social Science Research Council, Dr Charles Reece, ICI, Dr Kenneth Richardson, Professor Gulbenkian Foundation, Professor Stephen Roberts, Open University, Dr Ernest Rudd, University of East of Sussex, Professor Maurice Shock, Social Security, Mr Clive Saville, Department of Education and Science, Mr Peter Scott, *The Times Higher Education Supplement*, Professor John Sizer, Loughborough University of Technology, Dr David Turner, Department of Education and Science, Dr Ronald Tyson, The Leverhulme Trust, Professor Philip Whitehead, M.P., Dr Noelle Whitehead, University of Bristol, Sir Brinsley Williams, University of Lancaster, Professor Gareth Williams, University College, Cardiff.

Programme Administrator: Mrs Betsy Bruce

W. H. Auden, Christopher Isherwood and Stephen Spender.

Literary images colour people's perceptions of a decade but have they the power to persist, asks Bernard Bergonzi

Myths of the thirties

Recent studies of literature and society in the 1930s have shown a common concern with the typology and mythology of the period. If the representative literature, such as the poetry of W. H. Auden and Louis MacNeice or the early novels of Graham Greene and George Orwell, is acutely responsive to contemporary social realities, the society presents itself in recurring images and archetypes. Auden, above all, had a sharp, categorizing vision of the world:

Their splendid people, their wise acres,
Professors, agents, magic-makers,
Their poets and apostles,
Their bankers and their brokers too,
And ironmasters shall turn blue
Shall fade away like morning dew
With club-room fossils.

Such lists abound in Auden's poetry; this one, from an early poem originally called "A Communist to Others", has acquired a new twist of meaning with the passing of time: "poets and apostles" now suggests the Cambridge Apostles and what we have learnt of their divided loyalties in the 1930s. Lists and catalogues of representative types of people and things, strings of nouns and phrases prefaced by the placing definite article, were part of the literary idiom of the time. Then, on September 1, 1939, as the Second World War began, Auden wrapped up and dismissed the whole decade in a magisterial phrase that was to become famous: "As the clever hopes expire / Of a low dishonest decade." It is satisfyingly comprehensive, but one must resist it: I do not know the method of drawing up an indictment against a whole people," said Edmund Burke, and one can say the same thing about indicting a whole decade.

It would be far too simple to claim that Auden alone was responsible for our subsequent view of the 1930s; but his broad typifying view was and remains immensely influential. Types became archetypes, and archetypes turned into myths; indeed, the writers of the Auden generation were inclined to mythicize their experience from the very beginning. Auden's *The Orators*, published in 1932, shows the process at work. *The Orators* is a melange of verse and prose of, so to speak, dazzling obscurity, which includes some of Auden's most brilliant writing. *It is supposedly* a revolutionary text, though it also contains many private jokes and allusions which mythologize the author and his friends. At its centre is the potent figure of the airman-as-hero, supposedly an embodiment of left-wing ideal, but ideologically ambiguous, since the lonely airman was as much a fascist emblem as a revolutionary socialist one. In later years Auden felt very much alienated from *The Orators* and confessed that it seemed to him that it might have been written by a young Nazi.

When the Spanish Civil War broke out literary myths moulded a complex historical reality, as was exemplified in André Malraux's *Days of Hope* (*L'Espoir*). This novel is directly based on Malraux's experience in the early months of the war of organizing the Republican air force; it was written soon after the events it describes and deliberately embodied a propagandist myth. Towards its conclusion Malraux presents an impressive tableau as the Republican aircraft triumph over their fascist enemies at the battle of Guadalajara. But an uninformed reader might get a misleading sense of the course of the war if he was not aware that soon after the victory that Malraux describes the Republican air force lost its ascendency and never regained it. Myths appeal profoundly to the imagination and the feelings; but they are not history, however much they draw on it. The First World War, for instance, was a terrible and enormously complicated set of events. Literary readers obtain a vivid but mythicized image of the war if they rely solely on the poetry of Wilfred Owen and Siegfried Sassoon, or the song-and-dance routines and arresting slogans of *Oh What a Lovely War!*

To take another example from the 1930s. Christopher Isherwood has memorably recorded pre-Hitler Berlin in *Mr Norris Changes Trains* and *Goodbye to Berlin*, to the extent that he seems not only the recorder but the inventor of that doomed time and place; the captivating myth of Sally Bowles hangs over everything (particularly if we consider its successive transformations, from the novella of *Sally Bowles* to the play of *I am a Camera* to the film of *Cabaret*). Isherwood's deadpan sentence and photographic realism might suggest that he truly is a camera, passively recording the stuff of history. But attentive reading soon reveals that the Berlin stories embody an art of caricature and careful selection, a network of heightened effects and significant omissions.

Recently, in the course of teaching a graduate course of the fiction of the 1930s, I asked the members of the seminar to contribute, quickly and without time for reflection, their pre-existing impressions of the period. The responses were predictable: the Slump, hunger marchers, Jarrow; fascism; the war in Spain; the poetry of the Auden generation. All of these things existed and were important, but their significance is both reinforced and distorted by their autonomous importance as literary myths. Books such as Walter Greenwood's *Love on the Dole* and George Orwell's *The Road to Wigan Pier* provide images of English life in the 1930s which are so strong and so appalling that they colour many readers' apprehension of *what was in fact* a very diverse period, when social decay coexisted with new forms of social development.

Not all of England experienced the misery and destitution of Salford or Wigan. What is presented in literature gets further focused by the visual images from old newsreels, which are regularly shown in television documentaries. I find them invariably fascinating. But they are also predictable: the hunger marchers; battles between blackshirts and workers in the East End; and, above all, Spain with the barricades, the bombing of Madrid, the defiant militiamen, the odious fascists, the rallying of the International Brigades ("They floated over the oceans; / They walked the passes: they came to present their lives," wrote Auden in his supremely mythological poem, "Spain 1937"). The verbal and visual rhetoric were directed to one single, irresistible end: to see the Spanish War as a simple, clear-cut struggle between democracy and fascism. If there is one lesson to be learnt from the wealth of subsequent historical writing about the Spanish Civil War it is that there was nothing simple about it: what was presented as a battle between the international powers of darkness and light was in fact a bitter struggle between opposed forces deeply rooted in Spanish history and tradition.

The difficulty with myths is that they are fixed, static, a-historical, whereas historiography is always provisional and changing, liable to be affected by new evidence or challenging interpretations. The dominant literary images of the 1930s retain their emotional power, unaffected by noises from the next room of social and economic historians currently arguing over revisionist versions of the period. Not all the myths have persisted. We now have no illusions about Russia, for instance. Devotion to the Soviet Union

C. D. Lewis: former Communist.

was common at the time though not often reflected in the literature that is still read. C. Day Lewis was an active member of the Communist Party for some years, but his sour remarks in his recent biography that Day Lewis was quite uninformed about Russia and had little real interest in it.

Day Lewis was unusually insular, perhaps. Even so, Republican Spain attracted many more writers in person than the Soviet Union, the latter being visited, as a rule, only by dedicated party members or fellow-travellers. Yet Day Lewis, an amiably English and unideological figure at heart, was at least casually acquainted with Guy Burgess and Anthony Blunt. The subsequent revelations about Burgess and Blunt, Philby and Maclean, have inevitably affected attitudes to the ideological movements of those years, in the light of what we now know about Stalinist terror. Given the global crisis and near-collapse of capitalism in the early 1930s it was reasonable that intellectuals might turn to socialism as an ideal. What was a lot less reasonable or even intelligible was their readiness to take at face value the assertion that the socialist ideal was already embodied in the Soviet Union – not all of them did, of course: André Gide and George Orwell got into trouble for heresy on this point.

The encounter between literature and politics in the 1930s has been well and thoroughly discussed by Samuel Hynes in *The Auden Generation* (1976), a work that has been criticized as offering too much of its own myth though no one has yet given a convincing alternative interpretation. In my own book, *Reading the Thirties* (1978), I suggested that the approach in terms of politics had been taken about as far as it profitably could, and that a different view of the period shows it as responding, often in troubled and contradictory ways, to the impact of mass technology. In some respects technology fed directly into myth, as in the "helmeted airman" that fascinated Auden and other writers. Most technological influence was less direct but still very pervasive. I suggested in *Reading the Thirties* that two of the most important presences were the cinema and the fear of aerial bombing – one an enhancement of life, the other a desperate threat to it – both products of new technology. I provided a range of examples in literature and since I have come across many more. The prevalence of images of bombing has been discussed in an excellent essay, "Popular Fiction and the Next War, 1918–1939" by Martin Coadel, in *Class, Culture and Social Change: A New View of the 1930s*, edited by Frank Gloversmith (1980). In 1936 George Orwell made Gordon Comstock, the gloomy hero of *Keep the Aspidistra Flying*, look forward with apocalyptic relish to the bombing of London.

That was in fiction, but in real life David Gascoyne, standing on Hampstead Heath in October 1936, reflected: "What a heart-shaking spectacle it will be from this height some night soon to come, when the enemy squadrons blackening the skies rain down destroying fire upon those roofs." (*Journal 1936–37*, first published 1980). Aerial bombing had already become familiar, in Abyssinia and Spain, but such intensely literary ways of responding to it show how clear could take a mythic shape. References to bombs and air raids occur in unlikely places, like small, half-hidden clues to a prevalent state of mind. For instance, in a description of industrial landscape early on in Walter Greenwood's *Love on the Dole* we read: "A double row of six smaller chimneys thrust up their steel muzzles like cannon trained on air raiders"; while in a later novel of the 1930s, different in every possible way in subject and treatment, Elizabeth Bowen's *Death of the Heart*, occurs this sentence: "Appalling as the talk with Daphne had been, it had not been so finally fatal, when you looked back at it, as an earthquake or a dropped bomb." In both these novels, too, there are references to cinema-going; in the former as a weekly treat for the people of Salford when they are in work; and as something they can no longer afford when they are unemployed; in the latter as a detailed account of a visit to a sumptuous West End cinema. People go to the cinema all the time in the novels of the 1930s, as they did in real life.

The cinema was a universally present sign of the new world of mass civilization and technological advance that co-existed with the depression and industrial decline, along with the new housing estates, the chain stores, the arterial roads, the motor car, the radio. The spread of this new world was a steady process, not a matter of arresting or dramatic events that could be captured on newsreels or mythicized in literature.

Significantly, *The Road to Wigan Pier*, that observant though very subjective anatomy of social and industrial decay, looks not only at the slums but at the results of slum-clearance: the new council housing estates, decent but utterly bleak, on the fringes of industrial cities. Orwell makes a thoughtful assessment of the loss and gain involved in such displacements; he noted that the destruction of slums also involved the loss of a close-knit community, long before this became a common insight. Returning to fiction in *Coming Up for Air*, Orwell made a dispirited attack on the new England, the product of spreading suburbia and light industry and growing consumerism; exemplified in Hayes, Slough, Dagenham: "The kind of chilliness, the bright red brick everywhere, the temporary-looking shop-windows full of cut-price chocolates and radio parts."

D. H. Lawrence had made similar attacks on the emerging new world in the 1920s. But by the late 1930s that world, with all its potential for promise or destruction, had really arrived. It was dominated by the internal combustion engine, that technological invention of the late nineteenth century that has so transformed collective and individual life. As early as the turn of the century W. E. Henley had described the thrill of riding in a motor car in "A Song of Speed", and the car became a conspicuous entity in Edwardian texts such as *The Wind in the Willows* or *Howards End*. But it is not until the 1930s that writers convey the recognizable experience of sitting at the wheel and actually driving a car. I am thinking of Louis MacNeice's poem "Birmingham", or the wonderfully vivid evocation of driving a car at night in the rain in part XIV of his *Autumn Journal*:

The wheels whished in the wet, the flashy strings
Of neon lights unravelled, the windscreen-wiper
Kept at its job like a tiger in a cage or a cricket that sings
All night through for nothing.

Much of the writing has lost its original impact in terms of political reference and social attitude. But MacNeice, in this passage written over 40 years ago, is showing us something that has not changed at all in essentials: windscreen-wipers are *not the stuff of myth, but the familiar*, modest and, in more than one sense, necessary part of a universal experience. In 1938 only a restricted segment of society knew about driving cars; now nearly everyone does.

For readers concerned with the interpenetration of literature and history the 1930s seem endlessly interesting. But the study has its dangers. Some social historians very reasonably use literature as a source of knowledge, but they need to be alert to the distorting effects of personal or social myths, whether in Isherwood's Berlin or Graham Greene's Brighton; conversely, students of the literature of the 1930s should not deceive themselves that they have a good understanding of its historical context when what they are acquainted with are the potent but a-historical myths partly generated by the literature itself.

The author is a professor of English at the University of Warwick.

George Orwell (centre) during the siege of Huesca in Spain.

BOOKS

Routes to the Holocaust

by Richard Bessel

The Holocaust and the Historians
by Lucy S. Dawidowicz
Harvard University Press, £10.50
ISBN 0 674 40566 8

The Holocaust and the German Elite: genocide and national suicide in Germany, 1871–1945
by Rainer C. Baum
Croom Helm, £19.95
ISBN 0 7099 0656 0

The Nazi Question: an essay on the interpretations of National Socialism (1922–1975)
by Pierre Ayçoberry
Routledge & Kegan Paul, £12.50
ISBN 0 7100 0866 X

Few, if any, crimes can compare with the murder of millions of innocent people under Nazi rule during the Second World War. And few events have been so widely examined and discussed since that time. National Socialism and the crimes it generated have formed a central problem which historians of modern Germany – together with countless political scientists, psychologists and sociologists – have sought to explain, and it is difficult to believe that many educated people in Western Europe or the United States can be unaware of what was done at the Nazi death camps. Auschwitz is an image which continues to haunt us.

Therefore at first sight the claim by Lucy Dawidowicz, that the murder of the European Jews has been recorded "inadequately" in the history books, appears rather odd. Yet Mrs Dawidowicz should be in a position to know what she is talking about. The author of the widely circulated standard text, *The War against the Jews*, she knows her field as do few other historians, and her accusations that the Nazis' crimes against the Jews have been "neglected" by many contemporary historians bear serious attention.

Based upon lectures delivered in 1975 and 1977 and an article published in 1969, *The Holocaust and the Historians* traces the ways in which American, English, German, Soviet, Polish and Jewish historians have approached the murder of Europe's Jews. In the process the author makes a series of extremely grave allegations, and at times her righteous condemnation is deserved. Few in the West would attempt to defend the ways in which some Soviet historians have dealt with the atrocities committed by the Nazis; nor should the thinly-veiled antisemitism which disfigures some historical work emerging from Poland in the late 1960s meet with much praise. It is true that many Soviet and Polish studies did minimize, for political reasons, the attempt to wipe out the European Jewish population. Mrs Dawidowicz's account of the ups and downs of the research to come out of Poland is particularly informative. So too is her account of some of the more obscure materials generated by Jewish historians. Her knowledge of the Yiddish literature on this subject is second to none, and the reader seeking to learn more about how Jews themselves reacted to these crimes should find sections of this book rewarding.

It is, however, fairly easy to accuse Stalinist hacks of lapsed professional standards. More difficult to substantiate, and highly questionable, are some of the charges levelled against reputable historians in the United States, Britain and Germany. Part of the problem is that Mrs Dawidowicz seems to confuse her own method with historical truth. In her eyes the history of National Socialism is essentially the history of antisemitism, and the mass murder of the Jews is to be explained by examining "the relationship between Nazi ideas and bloody events that proceeded from them". Thus "Auschwitz was the direct consequence of a specific history of racist antisemitism". The only proper way to treat the history of the Third Reich is explicitly to place antisemitism and the persecution of the Jews at the centre of it; to do anything else is to "trivialize" the evil that was Nazism.

Of course the antisemitism of the Nazis was a crucially important factor which made possible the murder of Europe's Jews. But can genocide be explained simply and exclusively by documenting that its perpetrators wanted to do it, by drawing a line from antisemitic ideology and propaganda directly to the grizzly machinery of death which turned antisemitic fantasies into reality? Another part of the story, an extremely important part, concerns how the political, economic, social and bureaucratic systems of the Third Reich made such crimes possible, or even generated them. What Mrs Dawidowicz does not appear to understand is that the study of antisemitism and the chronicling of the crimes against the Jews do not form the only path towards an explanation of Nazi mass murder, that hers is not the only legitimate methodology. Many outstanding works of scholarship about the Third Reich, by analysing how that system functioned, tell us a great deal about how genocide could occur without necessarily documenting Hitler's antisemitism or describing the horrors of the camps. Not only does Mrs Dawidowicz not appreciate this, but she seems to possess no tolerance for those who do.

This rather narrow, intolerant attitude colours many of her comments about western historians. The Bullock biography of Hitler is taken to task because "its fifty-odd references to Jews and antisemitism . . . come to about fifteen pages, less than 2 per cent of the whole book". The researchers associated with the Institute for Contemporary History in Munich are criticized for their "moral disengagement" from the topic and "emotional anemia". And it is insinuated that Trevor-Roper's "bypassing or substantially glossing over the cluster of ideas dealing with the Jews and antisemitism" may itself be due to prejudice.

It also seems that Mrs Dawidowicz's awareness of the literature on Nazi Germany has been limited by her emotional and intellectual blinkers. Thus her assertion that antisemitism "met with popular acclaim in Germany, that "the *Judenfrage* riveted all Germany", is out of step with the findings of recent research (such as the sensitive and stimulating studies of public opinion in Bavaria during the Third Reich carried out by Ian Kershaw). More seriously, she apparently has not read the work of Christian Streit, whose study of Soviet prisoners of war in German hands does more than perhaps any other recent book to explain the crucial intermediate steps in putting the mass-murder machine into operation. Her contention, for example, that Auschwitz was set up first to kill the Jews and later used to murder non-Jews who had become expendable, is wrong; as Streit has demonstrated, it happened the other way round. This underlines the need to look beyond just antisemitism, and the sufferings of the Jews in order to understand what made the genocide possible.

Mrs Dawidowicz is hardly typical of historians who do not invest their work with sufficient moral involvement. By contrast, her own work is an impassioned plea for concern about and empathy with the victims of Nazi racialism. The reasons for this, and the intolerance towards historians whose approach is different from her own, may be understandable. However, the judgments which result cannot be accepted as a trustworthy guide to the historiography of Nazi genocide.

It would be difficult to find a treatment of the Nazi attempt to murder the Jews which differs more greatly from Dawidowicz's work than that of Rainer Baum, who, in *The Holocaust and the German Elite*, attempts to explain genocide by applying sociological theory to the course of German history from 1871. Where Dawidowicz is adamant that the murder of the Jews and the destruction of Jewish communal life were the "ultimate goals to which the National socialist state had dedicated itself", to Baum these horrific crimes constituted a mere "side show" unnecessary to the survival of the regime; the "main show", which provided the essential continuity in modern German history, was the reach for empire.

The key element of Baum's interpretation is his assertion that German elites were characterized by "moral indifference". This moral indifference, which was "institutionalized in German society and already present long before Hitler appeared" and which "played a central role in Germany's suicidal drive toward empire", eventually led to the policies of genocide. After positing this moral indifference, Baum discusses the various factors that made it possible, the most important of which was the deep "value dissensus" which afflicted the German nation. Because the various German elites did not share values there was no general basis upon which to build a sense of legitimacy, of shared moral positions, of caring about the consequences of one's actions. Alongside this Baum notes that Germany was something of a latecomer to the world of nation-states, that German unification coincided with rapid industrialization to produce "unusually severe integration problems", and that the unified German state inherited a "Prussian legacy of rule by interest constellation" which meant that "obedience to state authority was always primarily a matter of expediency". Together these factors resulted in the emergence of "destratified", or one-dimensional elites . . . suffering relative status deprivation [which] deprived these elites of the very tools required for

Children in a Nazi concentration camp at Oswiencim, Poland.

emancipation". However, Baum seems unaware that elements of this interpretation, particularly as it relates to the Wilhelmine period, have been challenged recently, and generally he seems out of touch with important historical research. Thus we have here a discussion of elites in Imperial Germany without reference to the work of Jürgen Kocka or Hartmut Kaelble; of the German Navy League without reference to Geoff Eley; of German social structure without reference to Theodor Geiger; of the *Mittelstand* without reference to Heinrich August Winkler; of voting behaviour without reference to Alfred Milatz; of responsibility for mass murder without reference to Christian Streit. What Baum has done in effect is to raid some historical literature for enough material to give his theorizing a bit of substance, but he has not done sufficient research to approach this literature critically.

As it stands, *The Holocaust and the German Elite* does raise some interesting questions. Did the men who administered mass murder suffer in any demonstrable way from "value dissensus"? Can the actual decisions which led to the "final solution" be explained with reference to "moral indifference in a nation that failed"? It is a shame that Baum did not attempt research which might have furnished some answers. Instead he has presented a tedious repetition of assertion, buttressed by circular reasoning and hidden in a maze of sociological jargon. Drawing upon functionalist sociology, Baum has constructed a model for explaining "national suicide" and mass murder which revolves around the values and attitudes of German elites. And yet he admits: "I treat values as givens and refrain from detailed inquiry as to their determinants." Had Baum tested his hypotheses with solid research, he might have written a stimulating book; as it stands, his conclusions are little more than the rephrasing of the original propositions.

Taken alongside the work of Dawidowicz and Baum, the attempt by Pierre Ayçoberry in *The Nazi Question* to outline the historiography of National Socialism provides a pleasant contrast. Avoiding sweeping claims to having explained the course of German history or to possessing the formula that others should have used, Ayçoberry has managed to discuss most of the important interpretations of Nazism in a manner that is both lucid and fair. First published in France in 1979, *The Nazi Question* is structured roughly chronologically. The first half covers interpretations generated during the lifetime of the "thousand-year Reich" – from statements of the Nazis themselves through those of perplexed conservatives and morally outraged humanists, to Marxists of various hues and left-wing social scientists. The second half of the book takes the reader through the immediate postwar reactions to the "German catastrophe"; the discussions of "totalitarianism"; generated in the shadow of the Cold War, the fascism debates of the 1960s, psychohistory and recent attempts to crack the nut with the aid of a computer.

The synopses of important contributions which Ayçoberry has presented are almost uniformly balanced and sensible; in some cases they are masterful. The discussions of the work of Franz Neumann, Karl Dietrich Bracher, Hannah Arendt, Alan Bullock and Martin Broszat are excellent, as are the examinations of various Marxist interpretations from the 1930s through the 1970s. Only once does Ayçoberry appear to lose patience with an author whose work he is describing – Peter Merkl and his "gruesomely monotonous" computer-powered regurgitation of Theodore Abel's research. Particularly informative are the discussions of French authors whose work is too little known to the English or German-speaking public. Except for these French contributions, however, most of the ground which Professor Ayçoberry has covered is quite familiar, but he has covered it extremely well.

It is probably inevitable with an historiographical work of this kind that some things are felt to be missing. For example, there is no evaluation of Hans Mommsen's important work on the civil service in the Third Reich; nor is there a discussion of more recent military-historical research (such as that by Klaus-Jürgen Müller); and the book's cut-off date of 1975 has meant that the debate currently raging among West German historians about whether the history of the Third Reich can best be explained by probing Hitler's intentions or by examining structures of power, is not considered. Other problems are caused by rather lackadaisical copy editing.

However, these are minor blemishes on a very solid piece of work which one happily can recommend to students.

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BOOKS

Lyrical impulse

Nightingale Fever: Russian poets in revolution
by Ronald Hingley
Weidenfeld & Nicolson, £12.95
ISBN 0 297 77902 8

This is an account of the lives and work of four Russian poets born between 1889 and 1892, all of whom began to write before the Revolution but produced their finest work after it.

They knew each other, of course, though with varying degrees of closeness; they all sprang from the comfortable background of the well-educated middle class of the two capitals. All met with hardship – political, personal or both – in their lives. Two died prematurely and tragically: Mandelshtam soon after being sent to a prison camp in 1938, Tsvetayeva by suicide in 1940. Pasternak died in 1960, not long after the publication of *Doctor Zhivago* and concomitant troubles. In the same year Akhmatova, the oldest and longest-lived of the quartet, signalled its significance to her in a short poem entitled *Four of Us*, carrying epigraphs from each of the others.

To group them together is a matter of hindsight: it would hardly have occurred to the poets themselves, or anyone else, to have done so in their maturity, in the 1920s or 1930s. Each had a most individual voice; they belonged to different literary groupings (or none); they were by no means the only remarkable individual poets, or groups of poets, writing in Russian; there were obvious affinities between them. One of them (Tsvetayeva) was for a long time physically absent from Russia, returning from emigration only a couple of years before she died; though it could be argued that spiritually she never left it. They differed politically: for several years Pasternak looked set to become Stalin's poet laureate, while Tsvetayeva vociferously supported the White anti-Bolshevik armies, and Mandelshtam was, according to Hingley, "incapable of adopting or simulating a political stance even to save his life". Yet the grouping from hindsight is not unjustified. All had an inner toughness that led to "a temperamental inability to yield to the pressures of their epoch even when they would perhaps have wished to do so". Each suffered, in Dr Hingley's view, from "Nightingale Fever": "an inability to stop singing regardless of the consequences".

The phrase is a neat and memorable one, taken from an early poem by Mandelshtam, and suits the book's theme admirably. Yet it has its ambiguities. In Russian poetry from Derzhavin to Pasternak the nightingale's voice is no mere sentimentalized image of prettiness, singing of summer in full-throated ease; rather it has boomed, whistled, intoxicated, even threatened; there has been something hypnotic and prophetic about it. And "fever" (*goryachka*) is not necessarily (*pace* Dr Hingley) a malady – it can also be an access of enthusiasm or excitement. These writers weren't just pathetic canaries, caged by cruel politicians, yet trilling unstoppably through their bars (as it happens, each had periods of silence lasting several years): the fascination of their work springs from the tension within each between a personal lyrical impulse and an acute feeling for history and destiny. The challenges that the apolitical Mandelshtam threw out to Stalin were not naive or accidental; history and poetry are reasonably linked as the themes of the great "novel in prose and verse" that Pasternak saw as summing up his life's work.

Nightingale Fever is in many ways a model work of popularization: brief, lucid, written with an expert's cool authority. Hingley has an eye for the ironies in which his theme abounds, and a no-nonsense style that will disconcert some, but seems a refreshing contrast to the unfocused gush that poetry often evokes. His inaccuracies are rare and usually a matter of side-issues. His task of juggling with four balls simultaneously is not easy, but he manages it well; one regrets only that he treats the period after 1940 (when two of his poets had died) as a coda, and gives only a sketch (a good sketch) of subsequent events. Yet all four poets have had an "afterlife": gradually, often grudgingly, their importance has become accepted in their native land, and all now appear in scholarly (though not comprehensive) Soviet editions. He never quite solves the problem of using poetry – often obscure and allusive poetry – in a biographical context: who could have extrapolated from the wit, self-assurance and crispness of Mandelshtam's late poetry to the sad conditions of exile that his widow describes? Probably there is no solution; at least Hingley realizes that poetry is a complicated thing, and gives us enough examples to let it speak for itself. His method of translation is most interesting: like Russian, his English tends to omit the articles "a" and "the", giving a "distanced" and arresting tone that is often effective and memorable.

Twenty, even fifteen years ago this book would have been inconceivable: these poets were fragmentarily known, their legacy ill-interpreted. Since then remarkable things have happened: memoirs as vivid as those of Nadezhda Mandelshtam (hard, sometimes, to balance these various accounts), the reappearance of lost work, a first crop of scholarly western (even occasionally Russian) monographs. These poets are receiving their due at last, and one hopes the turn of others, still half-wrapped in obscurity, will come.

"If I die, my life will be left beind, such a happy life, for which I am grateful to heaven, a life set out with as quiet, concentrated meaning as a book . . .". These words were written in 1951 (of all times!) by Pasternak; they epitomize the paradoxical note of joy behind the fates of those for whom "nightingale fever" might have been thought to be no more than a morbid source of suffering.

R. R. Milner-Gulland

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Boris Pasternak, photographed in the late 1950s.

Kafka in Moscow

Moscow Circles: an epic
by Benedict Erofeev
translated from the Russian by J. R. Dorrell
Writers and Readers, £6.95
ISBN 0 606495 26 1

One school of modern Russian dissident literature, inspired more by Sinyavsky than by Solzhenitsyn, favours heroes who are introspective, perverse, vigorously anti-social and rather lewd. This formula makes a change from conventional socialist realism (and from Solzhenitsyn) but of course it cannot of itself produce a masterpiece – whatever some western publishers may want us to believe. Benedict Erofeev's little book, which Writers and Readers absurdly describe as "a satire on an extravagantly Rabelaisian scale, reminiscent of the great Russian writers Gogol and Goncharov" presents a good case in point.

Moscow Circles is for the most part no more than a slight, sadly-jolly drunken romp related by an increasingly tipsy author-narrator who recalls his abortive attempt to travel by train from Moscow to Petushki. The latter is a little town some seventy miles east of the Soviet capital where the hero hopes to join his real or imaginary mistress. On the way he muses over episodes from his earlier life and meets various (presumably real) fellow passengers who recount a series of scabrous anecdotes and various (presumably imaginary) entities, such as God, Satan, some holy angels and a sphinx who all offer comments and advice.

In the course of the novel numerous Russian and non-Russian political and cultural notables (from Moshe Dayan to General Franco, and from Goethe to Gorky) are quite wittily ridiculed, much humour is derived from the manifestly dubious delights of inebriation – 11 varieties of vodka and more than a dozen other alcoholic beverages are repeatedly praised – and, as one might expect, considerable play is made with all four four-letter bodily functions. Erofeev has a lively imagination, he tells some good jokes and once the book gets under way his language is punchy, and his consistently easy and colloquial tone makes for an undemanding, light-hearted read.

So far, so good: no masterpiece, but nothing pretentious either, and no sign of any heavy message *à la russe*. Near the end, however, the sadly-jolly drunken romp suddenly turns into a Kafkaesque nightmare, as the author-narrator, having failed to reach Petushki, finds himself back in Moscow, pursued by four sinister assailants, who bring the book to a conclusion by palling him to the floor and driving a long awl into his neck. With a jolt the reader realizes that Erofeev is trying to turn his drink-sodden bum of a hero into some sort of Christ-figure *à la russe* after all. The trouble is, it doesn't quite fit. This late lurch into seriousness doesn't knit with the earlier relaxed levity and the reader is left feeling jarred, puzzled and somehow a little irritated with *Moscow Circles*. Perhaps socialist realism has something to be said for it after all.

D. J. Richards

Dr Richards is editor of "The Penguin Book of Russian Short Stories".

Gogol's influence

The Enigma of Gogol
by Richard Peace
Cambridge University Press, £23.50
ISBN 0 521 23824 2

For over a century and a half Gogol has attracted (and eluded) all labels. He has been called a realist, a romantic, a symbolist, a surrealist: every age has claimed him as its own.

Starting from the premise that enigma is inherent in both Gogol's personality and in his writing, Richard Peace, professor of Russian at the University of Hull, seems less concerned with its elucidation than with the paradoxical place of Gogol in Russian literature. For Gogol's work does not easily fit into the Russian literary tradition which is based on realism, psychological analysis, and lucid prose: Gogol's world is grotesque, ruled by hyperbole and arbitrariness; his characters are subhuman, often made of bare verbal tissue; his style is rich, intricate, inexhaustibly exuberant. The question the author asks is "How is it that this idiosyncratic and apparently eccentric writer could have wielded such enormous literary influence?".

The examination of Gogol's fiction neither answers this question satisfactorily nor offers an original reading of the texts. We are told once again that Gogol's perception tends to be overcome by seriousness, that his laughter is never far from fear, that his art was an oblique projection of his various "neuroses": sexual fears, concern about identity and status, anxiety about art and writing. Professor Peace dips into familiar interpretations without evolving any new approach. The book suffers from a curious lack of focus; it does not state its aims and limits, and no consistent point of view holds it together. On the whole, the author seems to be more at home examining content rather than form, and tends to see in Gogol's work serious psychological undertones.

Professor Peace's attempts to relate Gogol to the Russian literary tradition are singularly distorted by some serious omissions. Gogol's affinities with Russian medieval literature (dealt with in a rather cavalier manner) are shakily documented. Reviving the well-worn cliché of "laughter through tears", Richard Peace interprets it as a medieval consciousness in collision with a new sensibility brought about by the cultural impact of Sentimentalism. Two major areas which remain unexplored in the book are Gogol's German romantic sources, and his indebtedness to Pushkin which extends far beyond being given a few ideas, and without which any understanding of Gogol is seriously impaired.

The legacy of Gogol is convincingly argued in the case of Dostoevsky to whom Professor Pearce has devoted an earlier study. Flimsier evidence is adduced for the indebtedness of other writers. Richard Peace sees Gogol at the beginning of all things, even when a more convincing case might have been made for Pushkin. He is at his weakest on the twentieth century, invoking the names of Gorky, Babel and Blok whose affinities with Gogol are tenuous, to say the least, and ignoring Bely, Remizov and Bulgakov in whose work one constantly hears Gogolian echoes.

By the end of the book, we are no nearer to the "enigma" of Gogol. It is neither defined nor solved. The general reader will be grateful to Richard Peace for taking him through Gogol's texts and attempting to show that they can be read in a variety of ways. But if Gogol's "enigma" consists in his ambiguity, its essence still escapes us. For contrasts and incongruities are not only the very fabric of Gogol's fiction: refusal of a single vision is at the root of his vitality and his modernity, and the unifying principle of his art.

Georgette Donchin

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Oxford University Press

BOOKS

The land budget

Land Use and Living Space
by Robin H. Best
Methuen, £10.50 and £4.95
ISBN 0 416 73760 9 and 73770 6

The land of the title is, for the most part, Great Britain and the living space that of its predominantly urban population; for although the author is head of the department of environmental studies and countryside planning at Wye College, the emphasis in his book is very much on the expansion of the urban area and the consequences of such urban pressures on the farmland that still occupies nearly four-fifths of the total land area.

Concern for the pressures did much to shape our present system of land-use planning, with its strong emphasis on containing urban growth, but remarkably little firm evidence has been available to guide planners and policy-makers. No one has done more than Robin Best, together with his students and other collaborators, to remedy this situation.

Some measure of this ignorance is provided by the estimate given by the Ministry of Agriculture in 1937 to the Royal Commission on the Geographical Distribution of the Industrial Population. This estimate, derived as a residual figure by subtracting known rural uses from the total area, now appears in retrospect to have been at least a third too large and has not yet been attained 45 years later, despite the "galloping consumption of agricultural land" that is alleged to have occurred since. By careful evaluation of existing data and by the use of hitherto untapped sources, Best has been able to make reliable estimates of urban land and of the rate of change and to examine the consequences of such changes. More recently, he has extended his horizons to other developed countries in Western Europe and North America to provide an international dimension to a topic that is of increasing concern (though not of equal importance) everywhere.

Best's breakthrough was to use the town maps that had been prepared under the 1947 Town and Country Planning Act to establish a statistical relationship between urban land and population (the density-size rule) and to use this relationship to provide estimates of urban land for the whole country for about 1950-51; more reliable estimates were then made for 1961, and totals for 1971 were similarly computed by reference to the population census. With due allowances for differences of definition and dates of survey, these are compatible with other estimates based on direct measurement on maps of the Ordnance Survey and of the Second Land Use Survey, and on air photographs taken in 1969.

Best's principal basis for estimating changes in urban land has been the data on changes in area which have been compiled from the annual agricultural census. Analysis of these data has revealed differences in rates of transfer, particularly between the 1930s and the postwar period when, contrary to general belief, the scale of transfer was only some two-thirds of the prewar level. Data for counties have subsequently been used to reveal regional differences and have shown that rates of transfers in the Midlands and north-west England have (again contrary to received wisdom) been as high as, or higher than, those in south-east England throughout the postwar period.

One topic of particular concern to critics has been the presumed effects of such urbanization on future food supplies, and Lord Rothschild has speculated that the country could face food rationing if the current rate of transfer of agricultural land continued. Best had himself contributed to this debate in the 1950s by his work on the great garden controversy and here uses his estimates of probable urbanization by 2001 and land budgets prepared by colleagues at Wye and by the Centre of Agricultural Strategy to indicate that such transfers are unlikely to affect the ability of the farming industry to feed the nation. Other careful work by Best and his colluborators has similarly shown that statements about the extent to which good farmland has been urbanized exaggerate the scale of such transfers (although agricultural land quality does not seem to rank all that highly in the minds of planning officers).

More recently he has extended the scope of his analyses to other developed countries, a task that is made particularly difficult by problems of definition and by the fact that the situation in respect of data on urban land is even worse elsewhere. The results presented here must be regarded as a first approximation, but they do provide a perspective on the scale and pace of urbanization in the United Kingdom. They show that this country is in no sense unique (except paradoxically in the high proportion of its land in agricultural use); indeed, provision of urban land in relation to population is appreciably less generous than in most other countries. These themes – the statistics of land use, the extent of urban land, both national and regionally, the relationships between land transfers and land quality, the effects of urbanization on food supply and an international perspective on land use – provide the substance of this book, together with an historical account of changes in land use and a consideration of problems of definition. The book draws primarily on the contributions of the author and those he has stimulated, though work by Hall on urban containment, by Coleman on the Second Land Use Survey and by Blacksell and Gilg on the effectiveness of planning control is also summarized. The book is clearly written and effectively illustrated (except for poor reproduction of shadings on some maps).

Apart from summarizing the main findings of a programme of work stretching back over nearly three decades, the book plays an important role epitomized by the title of its last chapter, "Land-use: myths and reality", in which the author uses his findings to demolish a number of widely held myths – on wasteful urbanization, on the rapidity of change, on the dominance of urban growth in south-east England, on the consequences of urbanization for food production, and on the uniqueness of the British experience. Such demolition must not lead to a complacent view that the scale and nature of such transfers do not matter, although it is also important to recall the question posed by Best in his earlier study of New Towns, whether we were building the slums of tomorrow in our endeavours to safeguard agricultural land.

J. T. Coppock

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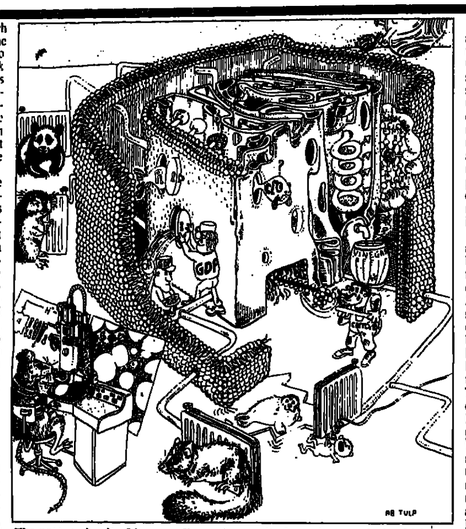

The proton circuit of brown adipose tissue mitochondria has a leak which can be plugged by nucleotides such as GDP. This is part of the thermogenic mechanism enabling fatty acids to be oxidized to acetate for heat. Chloride ion permeability, however, is still a puzzle. Cartoon by A. B. Tulp taken from Bioenergetics: an introduction to the chemiosmotic theory by David G. Nicholls.

Energetic dogma

Bioenergetics: an introduction to the chemiosmotic theory
by David G. Nicholls
Academic Press, £13.40 and £5.50
ISBN 0 12 518 120 5 and 122 3

There is a peculiarity of style in many writings on biological topics today which has been absent from writings in the more physical sciences for a long time, although it is sometimes present in those describing the extremes of nuclear physics and astronomy. Authors seem to have to assert "truth" rather than to provide proofs.

Let me quote from the preface to this book: "Although dissenting opinions exist for almost every topic covered, I have based the contents on what I feel to be current orthodoxy. ... I have assumed the central dogma of ... Similar language ran through the development of modern molecular biology for several years but now the dogma of DNA/RNA/protein relationships not only faces many dissenting opinions, but it has collapsed. ...

In the period between 1940 and 1960, before chemiosmosis, there was a dogma that biological systems converted by a series of chemical reactions the available energy from the light of the sun or from burning fuel into a form (adenosine triphosphate, ATP) that could be used in chemical syntheses. The intermediates of those reactions were not then found (although some of them are being found today). In about 1960 Mitchell and myself proposed a quite different route from the initial energy source to ATP. This involved no chemical compound intermediates, but just intermediate gradients of charge, ion concentration differences. As in a typical chemical battery circuit the flow of ions drove subsequent chemistry. Mitchell expanded this idea quantitatively and brilliantly into a particular form which became the dogma – the chemiosmotic hypothesis.

Dr Nicholls's book explains the number of different ways in which the hypothesis proved useful: it aided understanding of the movements of all kinds of ions and molecules in and out of cells across membranes. In explaining the underlying idea very well, his book should serve admirably as a noviciates' guide. And despite my conviction that the dogma is false, though the initial idea is sound, I hope that everybody who works in bioenergetics will read it.

Chemiosmosis states that chemical energy (in the form of ATP) is in balance, equilibrium, with the ion (osmotic) gradients. On lowering the input of energy, that is, the supply of light or oxygen, the charge gradient and the concentration of ATP are lowered together. Now the charge gradient and the concentration of ATP, of necessity, connect to all other energy-requiring processes of the cell so that all rise and fall together at equilibrium. The inside of a cell is then at a fixed physicochemical potential energy everywhere and since the inside of a cell is isotropic nothing can flow within it. The chemiosmotic dogma then comes face to face with the fact that most cells are anisotropic and there is internal flow: the cell not only possesses an inside and an outside but is locally organized along as well as across membranes. These local differences, however, receive no mention in this book. The theory that is now required cannot be evolved from a chemiosmotic equilibrium but must describe diffusion controls. Bioenergetics should then have been described in terms of ion currents as well as voltages. The function of uncouplers between ion gradients (now in flow) and ATP is then to affect particular pathways for the ions and not just to lower the voltage. Although he introduces the idea of control, Nicholls fails to tell us clearly what we need to know about currents not only across membranes but within cells. Measuring potentials tells you what could be happening but flow measures what actually does happen.

In science there is no place for dogma: questioning is of the essence in the discovery of truth. I hope that Nicholls will take the opportunity of his second and third editions to add sections wherever there is reasonable room for doubt, as his book could become a very good one.

R. J. P. Williams

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Jurassic ammonites

The Ammonites: their life and their world
by Ulrich Lehmann
Cambridge University Press, £9.95
ISBN 0 521 23627 4

Professor Lehmann has devoted much of his career as a palaeontologist to a painstaking study of Jurassic ammonites, extinct cephalopods which have fascinated man since antiquity because of their beauty, and latterly, scientists because of their value in providing the basis for correlation of Mesozoic marine sediments in many areas of the world. This English translation of Lehmann's 1976 book differs little from its German original, but some of the illustrations have been redrawn and there are no coloured illustrations and no folding chart.

An introductory chapter on cephalopods, both living and extinct, is followed by chapters on the earliest cephalopods, ammonite ontogeny, sexual dimorphism, cephalopod jaws, locomotion, ecology, heteromorph ammonites, and on the final demise of the group. An appendix on morphology concludes the book. However, by concentrating heavily on examples of his own, the author favours the Jurassic period, an imbalance that is compounded by undue emphasis on German localities and scholars. Although this attention to the work of his compatriots may be justified, as much as 70 per cent of the biographies of some chapters consist of German sources which are unavailable to most of the undergraduates and dedicated fossil collectors in Britain, for whom the book is partly intended.

There is, for example, no discussion of the work by Raup on computer generation of shell morphology, Chamberlain's sophisticated work on shell hydrodynamics, or Klinger's speculations on shell buoyancy. On the other hand, although the discovery of jaws and radulae in ammonites may be intrinsically fascinating, this topic receives half as much space again as the more fundamental question of the evolution of the cephalopods as a group. Similarly, a whole chapter is devoted to sexual dimorphism without an examination of its evolutionary significance.

Because ammonites are extinct and their external parts have not been fossilized, our knowledge of their anatomy is limited and modern-day comparison only extends to *Nautilus*, the only living externally shelled cephalopod. Although much of what is written on the group's biology and ecology is therefore highly speculative, it is still useful to have the views of a leading worker in the German school easily available. There are, however, many points of error, especially when Professor Lehmann strays from the Jurassic period, with which he is so familiar. *Volborthella* is not a cephalopod according to most workers (page 42); there are not only spiral shells of nautiloids from the Triassic onwards (page 42); lappets are neither known as ears (page 85) nor only from the Middle and Late Jurassic (page 94) (they occur, for example, in Cretaceous Perisphinctaceae and Hoplocrataceae); *Desmophyllites* is not a Triassic (page 109) but a late Cretaceous genus; and so on.

My most serious criticism, however, concerns the translation. Even if one was unaware that it derived from an original in another language, the clumsily translated phrases, archaisms, and poor syntax and grammatical construction make this readily apparent. Simple errors of fact and English should never have escaped the editing process, and serve only to confuse the reader and render parts of the book incomprehensible. As particularly unfortunate examples suffice here: "decomposition is a process of combustion"; "largely (for greatly) reduced shells"; "kaleidoscopic-type evolution" "(mosaic evolution?); "it is impossible to infuse any amount of clayey mud into the empty shell"; and so on. The almost exclusive citation of reference to German geology and localities is unfortunate in geological terms. Most will be quite meaningless to all but the specialist, and certainly unknown to the average English-speaking student (for example, "the Schwabischen falcifer bed").

Literal translations of traditional German nomenclature (for example "black, brown and white Jurassic") will be incomprehensible to most workers, as will the statement: "*Pleuroceras* from the Lias delta of Haverlahwiese near Braunschweig" (page 133). The acutal meaning of this phrase stems back to the work of von Buch, who in 1837 divided the Jurassic into Lower Jurassic or Black Jura, Middle Jurassic or Brown Jura and Upper Jurassic or White Jura, and to that of Quenstedt, who used the Greek letters alpha to zeta for six divisions of each of von Buch's main divisions. The name *Pleuroceras* in question comes not from deltaic sediments but from the fourth division of the Lias, the Lias δ, the equivalent of the Pliensbachian stage.

The undergraduate or academic will, however, find this book valuable as a source for the German literature available. Otherwise, the *Ammonoidea*, recently published as the Systematics Association special volume 18 by Academic Press (edited by M. R. House and J. R. Senior, 1981), has a more complete coverage of all aspects of the group, while the relevant volume of the *Treatise of Invertebrate Paleontology* (edited by R. C. Moore, University of Kansas and Geological Society of America, 1957) remains the definitive basis for initial identification.

W. J. Kennedy

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Correction

The publisher of Michael Grant's *Dawn of the Middle Ages* is Weidenfeld and Nicolson, and not Thames and Hudson, as stated in the issue of 12th March.

BOOKS

SOCIOLOGY

Hidden riddles

A Contemporary Critique of Historical Materialism, volume one: Power, Property and the State
by Anthony Giddens
Macmillan, £12.95 and £4.95
ISBN 0 333 30971 5 and 30972 3

This highly pessimistic book ends by telling us that capitalism has fashioned a world which conjoins the banal and the apocalyptic; human diversity is being devoured by the "created space" of capitalism, and we are all in danger of being blown up. *A Contemporary Critique of Historical Materialism* thus combines political prophecy with social theory. Political prophets are familiar beings, but what is a social theorist?

He is, I think, an exponent of a kind of intellectual operation which can be illustrated at many points in Anthony Giddens's text. For example: "The 'pulverizing and macadamizing tendency of modern history' of which Maitland once spoke can be derived in a direct manner from Marx's analysis of capitalism as a system of commodity production ...". Social theory thus consists in setting up analytical models from which we may logically derive what we independently know to have happened. There is, of course, a little more to it than this, but the general structure is clear: propositions about society compose a model (the models have names like "capitalism", "feudalism", "post-industrial society") which both explains what we crudely call "reality" and is also validated by this reality. The "reality" with which social theory is concerned can usually be found in contemporary political preoccupations. In Marx, industrialism in nineteenth-century Europe. In Giddens, more contemporary issues: the power of the state and the threat of totalitarianism, the homogenization of life, nuclear destruction, and the selfishness of nation-states at the UN. In principle, the dog of social theory wags the tail of contemporary problems, but in fact the tail usually wags the dog.

All of these contemporary political problems belong to "the world that capitalism has fashioned". Giddens, however, is far from being the kind of thinker who ties all bad things into a single bundle and calls it "capitalism". He is well aware, for example, that in the age of the Gulag, socialism no longer walks the world in innocence. He even goes so far as to discover that socialism, just like capitalism, has its "contradictions". He does not go so far as to discover a "crisis" of socialism, but that is presumably because "crises" technically indicate that a system is in the process of being superseded by another system, and he is sceptical of evolutionary theories. Further, like many other current thinkers whose categories are fundamentally Marxist, he recognizes in both civil liberties and some features of contemporary affluence things which any tolerable society of the future ought to preserve.

Giddens in fact disavows the label of "Marxist", and he has good reasons for doing so. He thinks the Marxist theory of the state is a disaster area, and that many features of the modern state cannot be derived from the mode of production. He is particularly hostile to anything he recognizes as "functionalism" and all the optimistic evolutionism of Marx's nineteenth-century addiction to progress is disposed of as mere scaffolding hanging in the air. Giddens has a brisk way with Marx whenever (as not infrequently) he is banal or self-contradictory, and the reader is spared the tedium of Marxist exegesis masquerading as social theory.

In a deeper sense, however, Giddens evidently works within the Marxist paradigm. Marxism for this purpose is the view that the evils we endure result not from mere error, corruption or folly, but from defects deeply if obscurely located within the social system itself. Modern society, thus construed as inherently rather than contingently defective, is called "capitalism", and the central problem of social theory is taken to be discovering the precise nature of the defect, usually thought to be concealed behind a smokescreen of ideological mystifications.

As a practitioner of this form of theorizing, Giddens brings out very clearly certain elements of the genre which were less evident among its originators. It is clear to him, as it was to Marx and Engels, that all hitherto existing societies were radically unjust, and that this injustice was unmistakably revealed in such institutions as slavery and the *corvée*. The rulers of earlier civilizations oppressed and exploited their subjects even when they talked of justice. The real problem is presented by modern capitalism, which seems to be based upon constitutionalism and the free labour contract. Can it possibly be that oppression and exploitation have been abolished? Certainly not! But where can these things be located? "In capitalism, exploitation is organized quite differently, and is concealed from view. The main task of *Capital* was precisely to solve the 'hidden riddle' of capitalist production: to show how an exploitative class relation is to be discovered at the very heart of the capitalist production process."

Passages like this help us to solve the "hidden riddle" of Giddensism, indeed of all Marxist, intellectual production. Whatever else they may be, these writings all generate a social model which reveals the shameful secret concealed in the very *structure* of modern society itself. We need not doubt that the world is awash with shameful secrets to be exposed. What distinguishes Marxist and other forms of ideological social theory is the conviction that all bad things can be derived from *fundamental* features of social life. So long as the essential conditions of the class struggle emerge, all the traditional ideas associated with Marxism are dispensable.

Giddens is prepared to make some bold and drastic revisions to the received canon, but his fundamental project remains within the paradigm. He is, however, a genuinely academic theorist, and hence recognizes that purely ideological ideas can't stand on their own feet. Unfortunately, his solution to the problems that thus arise is insufficiently radical. He is aware, for example, that there are academic difficulties with the whole idea of "exploitation". It depends for any cogency it might have upon unargued, off-stage standards. But he cannot quite bear to throw out so satisfying an idea as a bit of intolerable lumber. His solution, if I understand the argument, is to associate exploitation with power and domination as inevitable features of social life, and to suggest that we have concentrated too much upon their "negative" rather than their "positive" features. Exploitation thus seems to emerge as the sociological equivalent of the missionary position: not equal, exactly, in all respects, but plainly part of a cooperative enterprise having clear benefits to all concerned. Something like the Socratic argument that even the most oppressive rulers are likely in some respects to serve a general interest seems to be in play at this and other points; but it is difficult to be sure, because the argument often goes out of focus at crucial points.

Any "critique" of historical materialism must provide an account of the modern world. For Giddens, two points seem central: "the commodification of time", and the use of surveillance as a form of social control in the modern nation-state. And the pessimism of the book emerges clearly in that, for all the liberalism of some of his political opinions, Giddens is clearly concerned to emphasize how deprived and how threatened are those who live in a modern liberal state.

The "commodification of time" is the transposition into up-market Heideggerian language of some familiar material about the role of clocks and time-keeping in the emergence of the modern world. Lewis Mumford, one of the pioneers of this line, thought that capitalism and technology were coordinate developments, but Giddens is emphatic that it was the emerging needs of capitalism which brought about the technological modern age. Many of the early transforming machines, he points out, had already been invented by the Chinese, the Arabs and others. What modernization required was a whole new attitude to work, time and punctuality. The social stress of early industrialization is attributed by Giddens as much to the pains of induction into these demanding mechanical regularities of behaviour as to straightforward conflict of interest.

The evidence for this argument comes largely from English social history, and at several points Giddens raises the question of whether England was not, in important ways, so different a country from the rest of Europe as to constitute a rickety empirical basis for an argument about "capitalism". It is typical of his virtues to raise such questions; alas it is also typical that such daring is usually immediately followed by fluid dissolves, jump cuts and out-of-focus argument.

Once one has penetrated the abracadabra of "time space distanciation", "spatio-temporal edges" and other such profundities, however, the argument appears to be a form of nostalgic romanticism. In the past, men lived more integrated lives in which experience was not chopped up into the mechanically fragmented units of time needed for the convenience of modern industrial production. Experience followed the seasons, men were in direct contact with nature rather than marooned in the "created environment" of capitalism, and tradition provided a moral guide to life.

The second major theme of the Giddensian critique is that the honestly oppressive rule found in earlier civilizations has been replaced by the covert domination of the modern nation-state. Whereas the argument about commodified time was English social history crossed with Heidegger, the theory of the state relies on Foucault's preoccupation with the modern passion for locking people away – criminals, lunatics and workers in factories. The prison is, as it were, the model for the factory rather than the reverse. Critics have often suggested that the Marxist theory of capitalism is a reworking of the Orphic theology of the ancient Greeks, in which man was a cosmic prisoner. Foucault, and Giddens with him, seem to have embraced this metaphor and made it an explicit account of modern life.

As with many Giddensian arguments, the source evidently lies in contemporary worries: in this case, the concern about what a state (or a multi-national corporation) might do with a computer. The Polish government, we recently learned, could pick up anyone it wanted within twenty-four hours because it had computerized the whereabouts of all Poles at home and abroad. Giddens generalizes this kind of power into the "storage function" upon which domination is always based. In past civilizations, the city was the locus of this function, but modern cities have, as they grew and multiplied, entirely lost this function, and hence lost also the political significance that goes with it. This raises another of those hidden riddles: where has this bad source of power gone? The answer is that surveillance lies at the heart of the territorially bounded modern state.

As often with this rather teasing book, the idea of surveillance promises more than is here actually delivered. Surveillance is part of an argument for the independence of the state from close determination by the mode of production. Scourging the functionalism which is evident in most Marxist accounts of the state, Giddens goes on to emphasize the "double-edged" character of many bourgeois values. Public life in the bourgeois state may be something of a sham, but in the light of modern experience we can see that it has some genuine advantages. The freedom of labour to contract with the employer is not totally rejected as an illusion behind which the proletarian is reduced to slavery.

These concessions to reality appear in context as part of a dialectical form of argument which can evade difficult questions. Yes, there can be causal laws of social development, but they are capable of being modified in terms of what social actors know". Bourgeois political economy is described as assuming that there are "abstractly given, universal laws to which economic life is subject". Are these laws false, or no laws at all? It appears to be suggested that they are, but the argument swerves aside to tell us that such laws are "of major ideological importance in the capitalist economy itself". Sometimes the issue gets lost in a sudden switch to methodological remarks, or in a skirmish with someone else who had opinions on a similar subject.

Still, by contrast with many practitioners in this rather murky area of social theory, Giddens clearly seeks to make himself understood, and he has the useful quality of provoking one to argument. He has let light into some dark places. But there are some problems with which his "critique" has yet to come to terms.

Marx and Engels fitted capitalism into a progressive evolutionary scheme. They were therefore able to some extent to pass off evolution as a form of teleological change. Further, capitalism could be independently identified in terms of the feudalism from which it supposedly emerged, and the socialism into which it was supposedly evolving. Now it is true that this scaffolding won't stand up. But if it is cut away, what becomes of the central idea of capitalism? How can we judge whether the world of the 1980s should be understood in terms of the abstract idea of capitalism which Marx composed out of the materials of Europe in the 1840s? At what point in the river of time does one social system evolve into another? For Marxism as a technique for seizing political power, the answer is easy: capitalism ceases after the revolution, and the question of identifying a revolution is left to practice (ie propaganda). But the social theorist is intellectually a good deal more sophisticated than a revolutionary, and it is difficult to see how he can do without the crutch of evolution.

Modern social theory is by speculative philosophy of history out of political realism, and its pedigree is never clearer than when it faces questions of this kind. It reveals itself as the metaphysics of social reality, in which whole blocks of social description must be scraped and moulded so as to fit together into a structure of interlocking essences. The scraping and moulding is done by juggling emphases, and relies on terms like "primarily" "substantially" "tends" and "fundamentally". But this is a process which can generate as many social models as anyone wishes. Such arbitrariness reveals the fact that most social theory, for all its academic, indeed highly scholastic, surface, contains a considerable quantity of political commitment. Hence while logically the theory explains the political situation, in fact the situation determines the theory.

It is this arbitrariness which is clear in the final remarks in the book concerning "the world that capitalism has fashioned". Has capitalism, one wonders, fashioned Giddens? Is he inside or outside this world? If he is inside it, then it is more complex than he has represented it. If he is outside, then capitalism ceases to be the all-inclusive monster of his book, and in its shrinkage ends as merely a few tendencies in the modern world that he deplores. The concept of a "contradiction" is commonly used in ideological discourse to avoid this kind of dilemma, but it merely amounts to having things both ways. Giddens would be better advised, I think, to stick with the wiser remarks he makes earlier in criticism of Foucault: "History is not retrievable as a human project; but neither is it comprehensible except as the outcome of human projects."

Kenneth Minogue

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Denis McQuail is Professor of Mass Communication at the University of Amsterdam; before taking this post he was Professor of Sociology at the University of Southampton.

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BOOKS

SOCIOLOGY

Keeping track

The Railwaymen: the history of the National Union of Railwaymen, volume two: The Beeching Era and After
by Philip S. Bagwell
Allen & Unwin, £15.00
ISBN 0 04 331084 2

The recent dispute on the railways has been a very public reminder of the difficult problems faced by that industry and of the intractable conflicts to which they give rise. Reading this book during the latest dispute provided a highly informative and detailed reminder of the long complex historical background to current difficulties. Significantly, perhaps, the author has not provided a concluding chapter to this volume; his story is still continuing.

This is the second volume of Professor Bagwell's history of the National Union of Railwaymen and covers the period since 1960. It is dominated by the decline in size of the industry associated particularly with Lord Beeching's chairmanship of the British Railways Board. The very adequate historical background to the discussion of the issues of the last twenty years often means going back to the period before the First World War and indicates again the contribution of the past to the present. Thus the book can be read quite independently of the earlier volume. Indeed it will be read with interest and profit by three rather different audiences.

In the first place it is a comprehensive and detailed history of the activities of a medium-sized trade union in a period of rapid, and at times dramatic, economic and political change. Based primarily on the union's own records, together with material the author has collected by interview and correspondence, it is an essential source of reference for anyone interested in the NUR, and an example of the multiferious activities and operations of a modern trade union, which for the NUR includes work for London Transport employees, busmen, dockworkers, and hotel and catering workers. Although the main protagonists are the national officials of the union, and their opposite numbers in British Rail and the other railway unions, a very large number of railwaymen feature individually in these pages – as speakers at conferences, movers of resolutions, writers of letters, and so on. Professor Bagwell writes with great sympathy and understanding for railwaymen, but is also capable of sharp critical comment when the union fails to take necessary action or to live up to its ideals.

Secondly, the book provides a valuable record, from one point of view, of the past two decades of industrial relations in Britain. Railwaymen were centrally involved in both the Taff Vale dispute and the Osborne case which led to the legislation which shaped twentieth-century trade unionism in Britain. It was perhaps fitting therefore that they should have been the subject of the only, very unsuccessful, use made of the "cooling-off" period and strike ballot provisions of the 1971 Industrial Relations Act. In addition to this, like most other unions the NUR and its members have been preoccupied during the last two decades with incomes policies, productivity bargaining and the social contract; with pay and the cost of living; with the closed shop and inter-union disputes; with industrial participation and worker-director proposals; and, perhaps more than most, with redundancy and closure. The story of their reaction to these problems, even though it is predominantly a descriptive account, adds to our understanding of recent developments in industrial relations.

Finally, the volume contributes to the social and economic history of transport in Britain. As the railways declined in importance in the face of the spread of car ownership and of competition from road haulage they underwent massive changes in technology. In a fascinating chapter on the railway workforce Professor Bagwell provides a clear description of what some would term "changes in the labour process", changes which tended to replace physical effort by mental stress, and which in many cases increased the loneliness and reduced the intrinsic satisfaction of the railwayman's job. It would be difficult, however, to see them just as further examples of "deskilling", and they have certainly vastly increased the efficiency and productivity of railway working.

Despite the improvements in pay and conditions which the union has won for its members, however, the overall impression is one of decline and failure. Basically this can be attributed to the absence of a national transport policy, and of any institutional framework, such as the British Transport Commission might have provided, which could have created and sustained one, and to the continuing inadequacy of resources and investment. Opinions will differ on the appropriate role for rail transport at the end of the twentieth century. What this book demonstrates, however, is that certain options have never had full and fair consideration and that a trade union – even one which organized parliamentary representation effectively as the NUR eventually did – has very limited influence on the fundamental decisions which determine the conditions of work and payment of its members, as well as the quality of life for the rest of us. The continuing lack of unity among the industry's trade unions, another sort of failure, merely makes this situation worse.

Rickard K. Brown

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Like minds

Managers in Focus: the British manager in the early 1980s
by Michael Poole, Roger Mansfield, Paul Blyton and Paul Frost
Gower, £12.50
ISBN 0 566 00468 2

Michael Poole and his colleagues have set out to confront some of the trickiest debates about the character of management in advanced capitalist societies. Contrasting the theorists of industrialism with a somewhat strangely defined school of "stratification theorists", they concentrate on the pattern of recruitment into management, the response of management to the growth of government intervention and to trade union power, and the attraction of managers to different forms of collective representation of their interests.

Armed with a postal survey of over a thousand managers drawn from the lists of the British Institute of Management, the light the authors can shed on these diverse themes is necessarily uneven. They are faced with the familiar problem of trying to evaluate theories of change with data collected at a single point in time. Thus while they can tell us that their managers were drawn from a relatively wide range of the middle classes, and while they confirm that British management is not particularly distinguished for its level of educational achievement, they can do little to assess the crucial thesis that there is a tendency towards more open and more meritocratic forms of recruitment.

Yet if there is sometimes a disturting gap between the theoretical problems addressed and the appropriateness of the evidence, some of the data collected have considerable intrinsic interest. Perhaps the most valuable part of the book is the discussion of attitudes to managerial authority. The British industrial relations system is distinctive for the early development of collective bargaining institutions and for the widespread growth of workplace bargaining in the postwar era. To what extent do such developments reflect the character of British managerial ideology? Have British managers come to adopt a philosophic distance from traditional conceptions of managerial prerogative – seeing themselves as serving the general interest and recognizing the value of a progressive extension of collective bargaining? Unless British managers have changed their views in a quite striking way in recent years, the evidence the authors present, suggests that collective bargaining has developed despite, rather than as a result of, British managerial ideology.

For the greater part, these managers gave clear priority to shareholder interests, they were hostile to the influence of the trade unions and they favoured purely consultative forms of worker participation. These attitudes were little influenced by whether or not managers owned shares in their employing organization, or by their social origins. They were remarkably homogeneous across different employment sectors (with the exception of education) and they varied little according to the size of the organization. The principal line of division between managers lay between those employed in the public and private sectors, but even here the differences were not particularly striking. The factor that most crucially shaped managerial attitudes, the authors argue, is the exercise of positions of control within complex organizations. There is a logic of control that leads to a suspicion of any institutional developments that are likely to limit managers' freedom of action.

If British employers have come to accept collective bargaining, it would appear to be because they have been constrained to do so. The analysis of the precise nature of those constraints and of the factors that influence particular bargaining strategies is clearly central to the agenda for further research.

Duncan Gallie

Duncan Gallie is reader in sociology at the University of Warwick.

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BOOKS

SOCIOLOGY

Don't wait for Newton

The Future of the Sociological Classics
edited by Buford Rhea
Allen & Unwin, £10.95 and £4.95
ISBN 0 04 301136 5 and 301137 3

Each of the nine short essays in this volume conscientiously attempts to answer a question put by the editor and commissioner of the 1978 lecture series on which they are based: "What use are the sociological classics today?" It is a familiar question to anyone currently engaged in undergraduate teaching in the social sciences, where it is almost obligatory to concentrate for part of the course on the "masters" or "founding fathers" of the contributing disciplines.

As such it begs a series of other questions. First, there is the problem of identifying sociological classics without setting unreasonable boundaries of chronology and influence. Secondly, one can query motives in the search for what one author here calls "ancestral spirits". Can these motives, in the best traditions of value-freedom, be separated from the concern to protect the tribe today? Thirdly, why has such genealogical enthusiasm returned to fashion?

As far as identification of the classics is concerned, there would be little dissent from professional social scientists in the United States about the rough consensus established here. The fixed points of reference are Marx, Weber and Durkheim, with Freud looming large if imprecisely in the background. Comte earns sporadic mention, particularly in the most overtly historical of the essays where Werner Cahnman ingeniously consolidates Hobbes's theory of rationality and Vico's guide to social development with the sociology of Toennies.

Meanwhile, modesty and the participation of two of the most influential of America's twentieth-century social theorists Lewis Coser and the late Talcott Parsons – bring the galaxy to a close with Herbert Blumer's essay on another American, George Herbert Mead. (Robert K. Merton appears only parenthetically.) The above exceptions apart the consensus underlines what Donald Levine calls, in the introduction to his essay on Simmel, sociology's "ecological disjunction". "Its most profound intellectual frontiers were laid in continental Europe, whereas it developed as a profession chiefly in the United States."

It may also have some bearing on the defensive posture implied in the search for and revisiting of the classics. There have been two periods when American professional sociology has felt itself significantly in need of redefinition: during the drive for institutional recognition of the last two decades of the nineteenth century, and during the current backlash against the undelivered promises of the large-scale (usually structural-functionalist) social investigations of the 1950s and 1960s. It is only at these stages that the profession has exhibited a widespread interest in its intellectual roots. In contrast, during the 1930s and early 1960s defining social science was much less of an approved activity than doing it.

Similarly, it is during such periods of professional anxiety that the non-cumulative nature of sociological achievement becomes most worrisome. Not only are the sociological classics diverse, even contradictory, but as Dennis Wrong (who offers here an excellent survey of the current reputation of Weber) reminds us, "waiting for Newton" has never been a viable option for the social scientist. Significantly there is no attempt here to elevate the major empirical works of American social science, of Park, Thomas, Znaniecki and Mills for example, to classical status.

Leaving aside some of the reservations about the implications of the exercise, *The Future of the Sociological Classics* should prove useful enough as a textbook. The authors (including Lopreato on Pareto, Tiryakian on Durkheim, and Zeitlin on Marx) are all acknowledged experts on and enthusiasts for their subjects.

This is even true when, in the case of Parsons, the subject is fundamentally himself. The last chapter, edited posthumously by Victor Lidz from the tape of a lecture, is a compelling piece of intellectual autobiography. Single-handed, Parsons demonstrates several vital facets of the American sociological tradition: its early close links with economics, its admiration (shared by most of the emerging "professional" disciplines in twentieth-century American higher education) for German scholarship, its dependence on translations, and its primary concern with issues of social cohesion and integration rather than social conflict and change.

David Watson

Dr Watson is dean of the modular course at Oxford Polytechnic.

State of the art

Crime and Society: readings in history and theory
compiled by Mike Fitzgerald, Gregor McLennan and Jennie Pawson
Routledge & Kegan Paul, in association with the Open University Press, £8.95
ISBN 0 7100 0944 5

Intended primarily as a resource for a new Open University course on "Issues in Crime and Society", this reader is hard to evaluate adequately without knowing what other materials will complement it. However, as the editors claim that in addition to its use as an Open University teaching aid "it provides a new point of departure for introducing criminology", it is fair to ask to what extent it stands alone as a text.

As such it explicitly limits itself to two aspects of the study of crime: history and theory, and falls into two major parts. The first is a collection of previously published pieces on various aspects of the history of crime and its control, subdivided into sections on law and ideology, policing, dangerous classes and the criminalization of youth. The selections range in date or origin from Mayhew's contemporary vignettes of Victorian low-life to recent papers by historians such as Hay, Brewer and Styles, Ignatieff, Storch and Stedman Jones. These selections are all individually excellent, although well-known and readily available. Their publication together constitutes a convenient resource, but it would only be fully justified if the editors had provided more of an overall perspective.

The editors disavow any intention of illustrating "a chronological or evolutionary sequence", but see the essays as giving "indispensable background material for general issues". They also only point to some very general implications, emphasizing that "definitions of law, crime and punishment *change* according to economic and ideological circumstances" and that "a historical awareness guards against the impression that features of law-breaking, policing or punishment are either entirely new, or, conversely, remain unchanged". These are rather slight lessons to draw from such rich source material.

The theory section of the book consists of eight new, specially commissioned articles surveying various traditions. Stan Cohen updates his well-known institutional history of British criminology (originally presented at the 1971 BSA Conference). Jock Young typologizes the models of man and society which underlie the main schools of criminological thought in what is essentially a condensed version of *The New Criminology*. Stuart Hall and Phil Scraton provide an admirably lucid guide to the recent luxuriant growth of Marxist writings on law, class and control. A set of chapters by Sapsford, Heathcote, Dallos, Muncie and Fitzgerald describe the attempts to give positivistic, "scientific" accounts of the individual, social and family determinants of deviance, and the recent humanistic strands in sociology and psychology which have questioned these efforts.

The chapters are all well-written, comprehensive, state-of-the-art surveys. Unfortunately they indicate that the art is not in a healthy state. The greatest defect of most currently available texts in sociology, and especially criminology, is the presentation of the subject in terms of a set of competing paradigms, described at a very programmatic and abstract level.

The potted survey approach is not only unsatisfying in its lack of substance, but also in its necessarily superficial consideration of theory and theorists. These have to be caricatured to fit the available pigeonholes. The "Ralph Miliband", for example, who figures in the Miliband-Poulantzas debate as presented in Hall and Scraton's article (and many other places) is said to explain the state in terms of the personnel who staff it. Such an "individualistic" theory is a necessary Aunt Sally for the presentation of a contrasting structuralist account. In fact Miliband's *The State in Capitalist Society*, usually said to be the exemplar of this approach, devotes only one of its nine chapters to the class position of state personnel. Most of the book considers the structural and ideological limits to the capacity of governments achieving reform even if they are not drawn from ruling class backgrounds. This kind of distortion of particular theories is a necessary consequence of presenting theory as a pot-pourri of sharply contrasting positions rather than drawing on these to analyse specific issues. A more promising line is indicated by Ian Taylor's recent *Law and Order* book, which grapples head-on with the issues of crime and control.

Robert Reiner

Robert Reiner is lecturer in sociology at the University of Bristol.

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BOOKS
SOCIOLOGY

Races apart

Ethnic Segregation in Cities
edited by Ceri Peach, Vaughan Robinson and Susan Smith
Croom Helm, £12.95
ISBN 0 7099 2012 1

Ambiguous Ethnicity: interracial families in London
by Susan Benson
Cambridge University Press, £16.50 and £5.50
ISBN 0 521 23017 9 and 29769 9

As John Rex has emphasized in his most recent monograph, the study of race in its modern urban setting should not be divorced from the wider political context of a post-imperial world. Nevertheless, it was urban sociology, in the form given it between the wars by Robert Park and his Chicago colleagues, that gave birth to the idea of the sociology of race relations as a distinctive field.

Ethnic Segregation in Cities is a collection of papers that is framed basically within the Parkian tradition. It brings together work by both British and American writers, some of them sociologists and some social geographers. The geographer and co-editor Ceri Peach points up a basic theme both in his own paper and in the introduction, which cites Park's positivistic claim that the reduction of social relations to spatial relations would enable sociology to attain the (supposed) methodological rigour of the physical sciences. Peach's re-examination of data used by Ruby Jo Kennedy to support her "Triple Melting Pot" thesis leads him to re-affirm the validity of Park's view. Basing her case on figures for inter-marriage rates in New Haven, Connecticut, Kennedy had argued that ethnic and national diversities in America were being reduced, not to a single homogeneous culture, but to three major religious denominational divisions. Peach finds the original data to be at variance with this conclusion. Instead he finds the inter-marriage rates to be strongly correlated (though inversely) with the degree of segregation, and sees this as indicative of the fundamental importance of spatial factors in social relations.

But it is not so much Park the positivist as Park the interactionist who appeals to most social scientists today. This was the Park on whom Rex drew in his earlier Birmingham study, *Race Community and Conflict*. One aspect of that analysis that has given rise to a continuing controversy in Britain was Rex's apparent contention that it was racial exclusion that was responsible for the residential segregation of immigrants. This view was soon challenged by, among others, Badr Dahya, who pointed out that Pakistanis in particular had a number of positive reasons for wishing to maintain a degree of segregation from the host society.

The debate that ensued has been cast broadly in terms of "choice versus constraint", and many of the papers in this collection address themselves to this issue in one way or another. John Rex himself reviews some of this literature, and appraises recent housing and inner-city planning policy in the light of the characteristically challenging argument is that planning policy should *accept* ethnic segregation, rather than deny ethnic minorities the possibility of residential choice. In another paper on Britain, Vaughan Robinson discusses and elaborates the Ballards' four-stage development cycle of South Asian settlement in Britain, pointing out how changes in settlement patterns are accounted for by changes not in Asians' own orientations, but in their external circumstances. A further paper on Asians examines the growth of Asian business enterprise in Britain, and assesses what are seen as limited prospects in its capacity for expansion.

The piece that seems to me to make the most significant advance conceptually among these papers is by F. W. Boal on Northern Ireland. In this latest of a series of publications on residential patterns in Belfast, Boal focuses on the *positive* functions of segregation for ethnic and religious groups. These include defence, avoidance, and the preservation of culture, but here Boal is especially concerned with a fourth function: segregation as providing a territorial base for the political struggle with society in general. From this viewpoint, ethnic segregation represents a strategy of resource concentration and enlargement.

In conceptualizing this, Boal draws on Frank Parkin's work on group "closure". There would seem to be parallels also with the work of anthropologist Abner Cohen, on ethnicity as the symbolic expression of group interest in competitive or conflict situations. Such a perspective (as is perhaps suggested by Cohen's own recent analysis of the Notting Hill Carnival) might fruitfully be applied to the Brixton riots, thus compensating to some extent for the Scarman Report's manifest failure to come to terms with the subjective reality of rioters' behaviour.

Brixton and the subjective aspect of ethnicity feature also in Susan Benson's book, though with regard to a different sphere of life and an earlier date (epoch?). This is a detailed study of the family lives and relationships of twenty interracial couples who were resident in Brixton in 1970–71. She explores the way in which such couples manage to construct a conjugal life together while, to a greater or lesser degree, each partner's understanding of this is based on models drawn from her or his own culture. Conversely, Benson seeks within such relationships a reflection in microcosm of the strains and tensions of a racially antagonistic society.

In many ways the book has the shape of a standard British family study, though the data-base (as the author recognizes) is slim, and in trying to raise the significance of her findings above the level of her individual cases, the author struggles and often falls uneasily between the claims of the intuitive insight and of "typicality". One wonders whether, in a different political climate of race relations, this material would really warrant publication as a monograph. Despite its limitations, though, the book succeeds (in contrast to the Scarman Report for example) in putting across the experience of race relations at the personal level, and in showing how in the modern urban setting it is as much the issue of ethnic identification as of the "clash of cultures" that is crucial for the interracial couple and their child.

Robin Oakley

Robin Oakley is lecturer in sociology at Bedford College, London.

A great divide

Advances in Social Theory and Methodology: towards an integration of micro and macro-sociologies
edited by K. Knorr-Cetina and A. V. Cicourel
Routledge & Kegan Paul, £12.50 and £6.95
ISBN 0 7100 0946 1 and 0947 X

The increasing gulf between micro-sociology, concerned with the analysis of everyday life, personal interaction, conversational encounters, and macro-sociology, focusing on social institutions and the structure of societies, is often recognized as a major problem in the development of sociology.

A book of essays written by a group of established and distinguished sociologists who specifically address this problem and attempt to integrate the two approaches therefore promises to be an important, even exciting, contribution to the discipline. Regrettably, it does not live up to these promises: I can find no advances in theory or methodology here, nor are there any genuine movements towards the integration of micro and macro-sociologies. The apparent breadth and range of the essays is superficial: some recent theoretical and empirical sociological work that has made advances in these directions is ignored.

The basic problem of the micro/macro divide in sociology is *not* that sociologists specialize in one sort or the other and ignore the work of their counterparts: given the array of theory, methodology and empirical material in modern research, specialization is inevitable and certainly defensible. Rather, the problem is the tendency to present a particular specialization or approach as the *only* one that has any value or validity. The book does nothing to overcome this problem, but in fact exacerbates it. The supposed attempts at integration by Randall Collins and Rom Harré are in reality attacks on the validity of macro-sociology, while at the same time they betray an ignorance of macro-sociological issues. They deny the validity of macro-sociological propositions that are not based on micro-sociological observations: conversational encounters, for Collins, and personal interaction networks, for Harré, must be the basis of sociology.

It follows from this reductionism that social classes and economic depressions, among other things, are no more than rhetorical utterances and figments of the imaginations of misguided macro-sociologists. Conversational encounters, personal networks and interaction rituals are, of course, rather central to academic life, but perhaps not so in the less cossetted worlds of unemployed workers, underpaid immigrants and landless peasants. Collins presents a series of micro-propositions on which macro-sociology could be based. These, such as "Coercion leads to strong efforts to avoid being coerced" are only true in so far as they are tautologies.

Micro-sociologists have made important contributions to the integration of theory and method in relation to empirical material, and their impatience with macro-sociology is quite understandable in the light of macro theories which are based on woolly concepts and jargon without any clear empirical referents. Now not all macro theories are like this, but unfortunately the ones presented in this book are. Like their opposite numbers, they make no serious attempt to integrate the two approaches. Yet the basic problem here is not so much the micro/macro gap, but the one between theorizing and the real world.

The evolutionary nature and linear progress of human history, Habermas splendidly proclaims, has to be understood in terms of "cumulative learning processes". As an empirical statement, this can easily be shown to be false, and as an analytic or conceptual statement it is quite useless in the absence of any clear referents. Victor Lidz suggests that the function of language in social systems is akin to that of blood in organic systems, and attaches this elaborate metaphor to the abstract and overworn Parsonian theory of systems exchanges. Even more remarkably, Michel Callon and Bruno Latour claim that, on the basis of insights from reading Hobbes's *Leviathan*, our understanding of the activities of multinational corporations can be furthered by comparisons with the behaviour of baboons. I do not see how any of these theories can advance our understanding of anything.

The most sensible piece in the book, one which does make a serious attempt to integrate micro and macro approaches, is Aaron Cicourel's paper, which relates routine practices in organizations to structural factors. But since this adds little to the important work published by him in the 1960s, it is hardly an advance.

The significance of communication in linking interaction and social structure is a recurrent theme of the book. It is sad, though, that theoretical interests in communication seem to preclude any concern to communicate effectively with the reader. What substantial parts of it incomprehensible to all but select circles of devotees, this is not a pleasant book to read, and I would recommend that the experience be avoided.

David Berry

David Berry is senior lecturer in sociology at University College, Cardiff.

BOOKS
SOCIOLOGY

Act of synthesis

Industrial Sociology: an Introduction
by Maria Hirszowicz
Martin Robertson, £17.50 and £5.95
ISBN 0 85520 425 7 and 426 5

The central difficulty in writing sociology textbooks is to maintain an interesting thematic line while giving a full account of the literature, which comprises a mass of research findings and typologies. Sociologists have a tendency to break out on their own rather than to contribute to a single emerging edifice of knowledge. As a result these findings and, especially, typologies, are either so distinct from each other that students are likely to wonder what on earth they have in common, or so similar that they will be perplexed that they need individual existences. Very often the textbook writer becomes lost in the morass of hair-splitting and new departures.

Industrial sociology is one of the sub-disciplines where this problem is most prominent, if only because it has been one in which a good deal of research has been done. In view of this problem, Dr Hirszowicz is to be congratulated on providing an introductory work which packs in the results of many authors' contributions, while somehow never losing touch with the themes of real practical importance and interest to readers. This is partly achieved by sheer clarity of language and style, but partly by a sure grasp of what is relevant. It is particularly impressive that this is achieved without the easy path of recourse to a particular ideological line; the book retains an awareness of issues of social importance without lapsing from a cool professional stance.

As an example I would cite the chapter "Sociology of supervision: the foreman". This hoary-headed and unfashionable topic has only one real point of departure – the problem of the "man in the middle". But the author, by making use of exchange theory and of the literature on leadership styles, manages to sustain interest and demonstrate the theme's importance.

The coverage of the book ranges from the "big" sociological stalwarts (industrial society, managerialism, the state of the working class), through the main fields of industrial relations research, to the micro-sociology of small groups in industry, motivations to work and problems of supervision. However, it is not unfair to say that Dr Hirszowicz is more at home in the socio-psychological chapters. In the macro-sociological areas there are occasional gaps and slips of focus. An obvious gap, for example, is in the discussion of technology, which contains very little on the renewed interest in Taylorism and the associated major question of the degradation of skill. Similarly, labour-market dualism or segmentation is given only a page and a half. Loss of focus is more subjectively assessed, but I expect others will share my surprise at the assumption that a socialist ideology is widespread among British workers, even though the points the author makes about that ideology are well taken. She seems similarly to exaggerate the strength of the movement for industrial democracy. At the same time, even in these chapters Dr Hirszowicz retains an ability to encapsulate major points in a concise and prescient way: for example in the simple account of why trade unionism now acts in a very different context from that of its formative period.

A guide to the literature by Peter Cook concludes the book. He squeezes into his 19 pages a remarkably large amount of material without allowing it to become indigestible. This "guide" cleverly parallels the themes of the book, and in fact manages to be more fully up to date – a reflection, perhaps, of the logistics of preparing the text.

Colin Crouch

Colin Crouch is reader in sociology at the London School of Economics and Political Science.

Marriage à la mode

Marriage, Divorce, Remarriage
by Andrew J. Cherlin
Harvard University Press, £9.80
ISBN 0 674 55080 3

Professional Work and Marriage: an east-west comparison
by Marilyn Rueschemeyer
Macmillan, £20.00
ISBN 0 333 30080 7

Andrew Cherlin's study draws mainly on cohort data to examine the formation, dissolution and reformation of marriage in America this century. His main findings include the claim that the tendency among those born during the 1920s and 1930s to marry younger and have more children is historically distinctive. He also finds that cohabitation is becoming increasingly popular as a stage that precedes marriage or follows divorce, and that while the total rate of marital dissolution has hardly changed since 1860, by the mid-1970s more marriages ended in divorce rather than death for the first time ever in America. Finally, he claims that nearly 50 per cent of those married in 1970 will eventually divorce, although the vast majority will remarry.

Cherlin suggests that both period and cohort-based effects operated to produce the unusual demographic patterns of the 1950s:

> The childhood and adolescent experiences of many of the men and women born in the 1920s predisposed them to place a greater value on home and family and, possibly, a lower value on material comforts; when the general shift in values about family life occurred in the 1950s, they may have been in the vanguard. Moreover, the small size of the cohorts of the 1920s and 1930s worked to their advantage during the postwar economic boom. Their relatively favourable economic situation, in turn, may have made it easier for them to achieve the kind of family life they desired.

The whole analysis is very tentative. This is possibly not unrelated to the problem of trying to generalize about selected demographic changes without reference, except in the final chapter on racial differences, to the considerable class and ethnic diversity of American society. Overall, Cherlin's study conforms to the invisibility of males characteristic of this area of sociological inquiry. The majority of his tables and figures refer to women only, a few either contain a sex breakdown or no sex breakdown at all, and none refer to men only.

Marilyn Rueschemeyer's explorative study of professional workers and their spouses is really two books in one. The first half centres on a comparison between American single and dual-career families; the second presents a comparison between American and Eastern European dual-career families. Unfortunately these potentially fascinating analyses are built on weak methodological foundations. For example, the study originally consisted of structured interviews with 85 individuals, all of whom were married, but none of whom were married to each other. Subsequent sampling problems and perhaps belated recognition of this limitation led to the eventual inclusion of eight married couples.

The validity of the second part of the book is particularly questionable. Nearly half of the GDR sample (12 women) were originally part of a separate study and were interviewed three years later than the other respondents. Somewhat surprisingly this is given as a reason for not listing them in the tables. Finally and most importantly, all the Russian respondents were emigrants, mostly Jewish, who are now living in America, Israel or West Berlin. Apart from the problem of reporting on past rather than present circumstances, and then comparing them, the marginal ethnic status of these respondents considerably reduces their representativeness and therefore comparability with the rest of the sample.

Rueschemeyer's aim was to develop "ideas and insights" about the impact of work on family life; not to test hypotheses. The research began with the expectation that marital equality would be more evident in Eastern European than in American dual-career families which in turn were expected to be less "traditional" than American single-career families. These expectations were largely confirmed by Rueschemeyer's impressionistic data, with the significant qualification that sexual inequality is ubiquitous. Consequently, even among Eastern European dual-career couples "there remains an asymmetry of family roles".

Central to the analysis is the higher participation rate of women in the labour force in state socialist societies, although they are still under-represented in leadership positions. Thus in Eastern Europe practical support and social norms discourage women from being full-time housewives, whereas in America female employment outside the home is still regarded as "voluntary and optional". However, in the Eastern European families more "problems" concerning the husband's contribution to domestic work were reported by the Russian respondents than by the East German spouses. Rueschemeyer suggests that the latter were "younger and more integrated into the political system" and that "cultural traditions" are an important consideration. It seems to me that the "inherent bias" of the Russian respondents is vital here.

Stephen Edgell

Dr Edgell is senior lecturer in sociology at the University of Salford.

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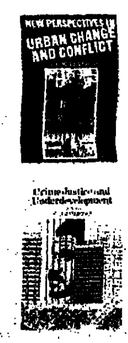

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BOOKS

SOCIOLOGY

Theory in research

Sociological Theory in Use
by Ken Menzies
Routledge & Kegan Paul, £9.95 and £4.95
ISBN 6 7100 0892 9 and 0893 7

Many books on sociological theory, Ken Menzies plausibly argues, read like a cross between literary criticism and the philosophy of science written by a fortune-teller turned sociologist.

Their *primary* objective seems to be to review what others have written, to clarify and define concepts, then to put forward the author's own theoretical statement of the relationship between these various concepts. They are concerned only secondarily, if at all, with the research evidence bearing upon the propositions which they advance. Rather than a creative tension between research and theory in sociology, there exists, if not a divorce, at least a separation. The gap is now so wide that there is little possibility of interplay between theory and research in many fields.

The evidence for this conclusion is documented at length in *Sociological Theory in Use*, a book which gives considerable pause for thought about the scientific achievements of sociology. The author's aim is to examine a cross-section of current sociological research in order to evaluate critically some of the major structures of explanation embodied in it. He seeks to throw light on how theory is used in practice, and to assess the worth of the many theories that researchers actually employ. His further aim is to see to what extent there is a difference between theoreticians' theory (not produced as part of research, or necessarily linked to empirical research at all) and research theory (to be used to understand a particular social process through empirical inquiry).

The method used is a systematic content analysis of a random sample of 570 research articles published between 1970 and 1979 in three American, one Canadian and three British sociological journals. In addition, a comparison is made with a further sample of 110 theoretical articles from the same journals, and material from a group of popular theory textbooks. The results are thus representative of the major centres of English-speaking sociology as reflected in its journals. An appendix lists the articles actually selected, so Menzies's results are replicable by anyone with the energy and interest to follow him. The strategy is justified in terms of journals representing mainstream sociology in North America and a major element of British sociology.

The main evidence presented is qualitative rather than quantitative, though one chapter presents a rather bald numerical summary of some of the main findings. Menzies's main purpose is twofold: to clarify some current research theories, and to consider criticisms of each of the theories as used in research. The body of the book consists of six chapters discussing in detail functionalism, symbolic interactionism, role theory, interest theory, action theory and middle-range theory from this point of view, in the light of the evidence from the articles. Two further chapters discuss theories of social mobility and the use and abuse of Durkheim and Weber in research theory. ("A substantial portion of the research using sociology's classics is poor research".)

Sociological Theory in Use is of greatest importance in documenting so painstakingly its general conclusions. For some it will appear to be labouring the obvious, but its message needs to be driven home. For example, while nearly one in five of research articles are concerned with middle-range theory, such theory receives almost no attention from theoreticians in textbooks or journal articles. So much for the actual influence of Merton's classic formulations on theorists. In its detail, the book is worthy but rather dull, a shortcoming which will reduce its value as a student text. A degree of boredom is probably inevitable, given the number of brief references to so many different pieces of work. Menzies also struggles bravely to provide a coherent overview of an increasingly fragmented discipline, but ultimately its incoherence defeats him.

Others will carp at the deliberate exclusion of Marxist sociology (poorly represented in any case in mainstream journals) from the author's analytic schema. More substantial criticisms, against which a defence is provided, are that the journals sampled do not adequately represent contemporary sociology, that the format of the journal article imposes constraint upon the presentation of research results, and that a good deal of current theoretical work would not be published in journals like the *American Sociological Review* or the *American Journal of Sociology*. The emphasis in the book on the extent to which theorists ignore wide areas of relevant research is one-sided. There is also another tale to be told about some researchers failing to take theory seriously. However, the author's suggestion that the current crisis in sociology owes a good deal to the gulf between research and theory is a convincing one. What he does not provide, alas, is any ideas about how the gap might be narrowed (if indeed it can be) nor why it appears to be such an enduring feature of the sociological enterprise:

Martin Bulmer

Dr Bulmer is lecturer in social administration at the London School of Economics.

Sexual divisions

Sexual Meanings: the cultural construction of gender and sexuality
edited by Sherry B. Ortner and Harriet Whitehead
Cambridge University Press, £25.00) and £7.95
ISBN 0 521 23965 6 and 28375 2

Biological Politics: feminist and anti-feminist perspectives
by Janet Sayers
Tavistock, £10.95 and £4.95
ISBN 0 422 77870 2 and 77880 X

"Anatomy is destiny", Freud maintained (although precisely what he meant by that is still open to debate). These two books are dedicated to challenging any simple interpretation of such a claim.

Sexual Meanings comprises a series of 10 papers (plus an introduction by the editors) exploring aspects of the cultural organization of gender and sexuality, primarily in various preliterate societies. The authors of this volume, we are told, have a commitment to a view of gender and sexuality as predominantly a cultural construct to which the "natural features of gender, and natural processes of sex and reproduction furnish only a suggestive and ambiguous backdrop". Thus, the first task of these writers is to describe the relationships which exist between relevant cultural symbols and meanings. This a number of essayists do at considerable length (the average essay length being around 20,000 words). The editors applaud this approach, arguing that much British social anthropology has tended to fragment elements of culture in the course of relating these to features of social organization, and thus tends to be reductionistic and to ignore the systemic character of culture. Their point is well taken that serious distortions may arise if symbols and meaning are not adequately located within the wider cultural context. However, the danger which then looms is that of an inability to escape from the level of the descriptive. For all its faults, traditional British social anthropology made a fairly consistent effort to tell us not merely *what* was going on, but also *why* it was. Regrettably, many of these essays fail to advance very far from description of belief and action in the cultures concerned.

A few of the essays do endeavour to move from what the editors call a "culturalist" to a more "sociological" mode of analysis. Particularly successful in this respect are essays such as that by Jane Collier and Michelle Z. Rosaldo which explores the connexions between gender and sexual relationships on the one hand, and the dynamics of status and power on the other, in hunter-gatherer societies. Similarly successful is the contribution by Melissa Llewelyn-Davies on the relationship between conceptions of gender and the notion of property rights among the Masai of Kenya. Undoubtedly, this volume will find a place in college libraries, but it lacks the compelling intellectual thrust and general interest of Janet Sayers's *Biological Politics*.

Janet Sayers has produced a lucid and economical appraisal of conceptions of the role of biology in explanations of sexual inequality. She provides well-argued expositions and critical appraisal of a range of conservative analyses of the biological basis of sexual differentiation and stratification. Ideas about sexual equality being a danger to women's reproductive functions, for example, have proved remarkably durable. In the mid-nineteenth century figures as distinguished as Henry Maudsley and Herbert Spencer could assert with conviction that higher education for women was likely to lead to sterility; and even today women are excluded from certain types of work on the grounds, for example, that radiation may prove dangerous to their health or that of their offspring, as if only women were implicated in the process of reproduction.

Sayers critically explores the biological premises which underlie the arguments against equality for women in nineteenth-century Social Darwinism and its contemporary descendants. There is a lively chapter dealing with sociobiology another examining notions of the innate aggressiveness of men; and another reviewing arguments concerning sex differences in the brain.

Having discussed the biological foundations of anti-feminist thought, however, Sayers goes on to explore the ways in which feminists, too, have handled the biological basis of sexual divisions. She loses none of her critical acuteness in the analysis of "social constructionism" – that is, the view espoused by Ortner and Whitehead, that biology only has a role in determining sexual divisions through the way it is represented and construed in any particular society – nor in the appraisal of recent feminist reformulations of Freudian theory. Sayers usefully reminds us that Freud's now rather notorious phrase – with which I began – in fact summarized the position that male and female personality was a consequence of psychological processes through which the child came to interpret the biology with which it had been endowed. Sayers shows that the feminist critics of Freud have taken sharply diverging views resting on very different assumptions, with conflicting viewpoints regarding the goals appropriate for feminists to pursue.

Sayers discusses contemporary liberal and Marxist feminist theories, seeking to find a way through the ideological overemphasis on biological differences among those opposed to the equality of women, and their equally ideological neglect by many feminists themselves, to a view of women's social situation which does justice both to biology *and* to history in the shaping of female destiny.

This short book by no means exhausts the arguments about the role of biology in sexual inequality, but it provides a valuable and highly readable review of the field which should ensure that it becomes required reading on college courses in sociology, psychology and the like, as well as for everyone interested in the contemporary situation of women.

Roy Wallis

Roy Wallis is professor of sociology and dean of the faculty of economic and social sciences at The Queen's University of Belfast.

United Kingdom Facts, by Richard Rose and Ian McAllister, is published by Macmillan at £30.00. Its main purpose is to present data about Scotland, Wales and Northern Ireland, to complement the more easily available information about England.

NOTICE BOARD

Noticeboard is compiled by Patricia Santinelli and Mila Goldie

Honorary degrees

Dundee
The following are to awarded honorary degrees in July:
LLD: Dr John Harrison Burnett, principal and vice chancellor of the University of Edinburgh. Mr David Carnegy-Arbuthnott, member of the university court and convenor of the university's finance committee. Mr Lazelo Goombos, senior trustee of the Petroleum Law Education Trust. Dame Margaret Kidd, vice president of the British Federation of University Women. Mrs Jean MacIntosh, vice chairman of the National Consumer Council.

New University of Ulster
The following are to awarded honorary degrees in July:
DSc: Mr David F. Attenborough, for his work in popularizing interest in the natural sciences. The Rt Hon Lord Mais, for his contribution to public service.
DLitt: Dr Cyril Cusack, in recognition of his distinguished career in the world of drama. Mr R. E. Henderson for his contribution to the development of television in Northern Ireland. MA: Mrs Evelyn Burgess, for her contribution towards the founding and development of the Riverside Theatre. The Rev T. H. Mullin for his contribution to interest in local history.

Chairs

The following have been appointed to chairs at colleges of London University:
Sir Geoffrey Vivian P. Chamberlain, consultant obstetrician and gynaecologist at Queen Charlotte's Hospital for Women, has been appointed to the chair of Obstetrics and Gynaecology at St George's Hospital Medical School.
Professor John Michael Cheraip, professor of theoretical physics at Queen Mary College, has been promoted to the chair of theoretical physics at the college.
Professor Robert Donald Cohen, professor of metabolic medicine at the London Hospital Medical College, has been promoted to the chair of medicine at the college.
Dr Lawrence B. Freedman, head of policy studies at the Royal Institute of International Affairs, has been appointed to the chair of war studies at King's College.
Professor William Richard Kestinge, professor of physiology at the London Hospital Medical College has been promoted to the chair of physiology at the college.
Professor Martin Redwood, professor of electrical and electronic engineering at Queen Mary College, has been promoted to the chair of electrical and electronic engineering at the college.
Mr Gerald Westbury, consultant surgeon at Westminster Hospital has been appointed to the chair of surgery at the Institute of Cancer Research.
Professor John M. Crook has been awarded the title of professor of architectural history in respect of his post at Bedford College.

Forthcoming Events

"Innovation and Biotechnology", the second of the three Cantor lectures is to be delivered by Mr G. H. Fairclough, chief executive of Celltech Ltd on March 22 at 6pm at the Royal Society of Arts, 8 John Adam Street, London WC2N 6EZ. Professor John Ashworth, vice chancellor of the University of Salford will be in the chair.

* * *

"Demystifying Research", a residential workshop organized by the Association of Teachers in Social Work Education and financially supported by the Central Council for Education and Training in Social Work is being held at Sheffield University from March 22-26. It is aimed at academic and practice social work teachers who are not very experienced in research but wish to develop such activities and to support research by students whether at CQSW or post qualifying levels. Fee: £20. Details from Mr Alan Wellings, department of continuing education, Sheffield University.

* * *

"Workshop in Popular Music" is being held this Saturday at the Rutherford College, University of Kent. Topics include: "Popular Music Between the Wars" by Simon Frith. Details from Chris Hussiney, Rutherford College, Kent University, Canterbury, Kent.

* * *

In anticipation of the establishment of the Australian Studies Centre under Professor Geoffrey Bolton in September, the Institute of Commonwealth Studies has organized a short series of seminars from March until the end of May. The first is "Origins and early development of the bureaucracy in Australia: a report of work in progress", by Professor F. J. West of Deakin University on March 22, at 1.15pm. Details from the director's secretary, Institute of Commonwealth Studies, 27 Russell Square, London WC1.

* * *

"An introduction to microcomputers" a one day course for prospective first time users of microcomputers is being offered by Middlesex Polytechnic on March 24 from 9.30-5pm at Trent Park, Cockfosters site in North London College has been offered by Middlesex Polytechnic on March 24 from 9.30-5pm at Trent Park, Cockfosters site in North London College has been offered by Middlesex Polytechnic on March 24 from 9.30-5pm at the Hendon location. Fee: £40. "The New Company Law" which offers opportunities to examine the implications of the Companies Acts 1980 and 1981. Fee: £40. Information on all three courses from Mrs Carol Moon, faculty of business studies and management, Middlesex Polytechnic, the Burroughs, London NW4.

* * *

"The Needs of Mature Students" is the theme of the Association of Colleges implementing DipHE programmes being held at the Royal Society of Arts, London WC2 on March 26. It will cover such topics as educational counselling, admissions criteria, HE access and future provision. Key speaker: Ms Sheila Browne, chief inspector, DES. Fee: £15. Details from the course secretary, Julie Hayward, School for Independent Study, North East London Polytechnic, Holbrook Annexe, London E15.

* * *

"Information Systems in Archaeology", is the theme of a weekend conference organized by the University of Leicester with support from the Department of Industry's Information Technology 82 from March 26-28. The conference is not intended as an esoteric discussion clouded with computer jargon but more as a consideration of ways in which archeologists can make the fullest and most efficient use of new technology. Details from the conference secretary, University of Leicester, Vaughan College, St Nicholas Circle, Leicester.

"Woman Waking up" an early figurative sculpture, one of five works by Anthony Caro which are in the Arts Council's collection now touring the country. It can be seen at the Hunterian Art Gallery in Glasgow until April 10, after which it goes to Huddersfield, Stoke on Trent, Hull, Rochdale and Colchester.

Grants

Sheffield
Biochemistry – Dr P. Horton – £68,920 from SERC to investigate the regulation of photosystem II in chloroplasts; Dr C. B. Taylor – £30,572 from the Wellcome Trust for a study of the immunospecific determination of enolase isoenzymes; Dr D. J. Watts – £20,410 from SERC to investigate the early stages of differentiation of *Dictyostelium discoideum*.
Biotechnology – Dr M. W. Fowler – £20,367 from United Kingdom Atomic Energy Authority for studies on immobilised cell technology.
Botany – Dr D. J. Read – £30,186 from NERC to investigate the structure and function of mycelial strands of mycorrhizal roots with special reference to their role in nutrient and water transport.
Ceramics, Glasses and Polymers – Dr B. Rand – £37,600 from SERC for the study of pitch-mesophase-carbon transformation by constructing reaction (or pseudo-phase) diagrams; Professor H. Rawson – £26,000 from the National Research Development Corporation for research into glass technology.
Chemical Engineering and Fuel Technology – Professor J. Swithenbank – £61,227 from SERC for a fundamental study of the performance of diesel fuel injection systems; £4,880 from the Central Electricity Generating Board for research into the modelling of coal-fired cyclone combustors.
Chemistry – Dr B. E. Mann – £17,800 from SERC in support of an NMR investigation of dynamic processes in organometallic compounds; Professor E. Haslam and Dr. T. H. Lilley – £22,888 from ARC for studies on astringency and the ripening of fruit.
Civil and Structural Engineering – Dr R. N. Swamy and others – £29,810 from SERC for studies into the use of polymer grids as reinforcement in cement-based composites; Dr R. Ashworth – £21,017 from SERC for work on automatic data capture and analysis applied to vehicle headways and other traffic flow parameters.
Control Engineering – Dr D. H. Owens – £25,930 from SERC for studies on the computer-aided design of control systems using root loci.
Electronic and Electrical Engineering – Mr M. McCormick and Dr. Howe – £31,800 from SERC for research into the development of hexavalent chromium solutions; Dr. J. Allison and Dr M. J. Thompson – £67,000 from the SERC/SERC for studies on sputtered solar cells.
History – Professor D. E. Luscombe – £45,000 from the Leverhulme Trust for studies on the writings of Peter Abelard.
Human Metabolism and Clinical Biochemistry – Professor R. G. G. Russell – £37,748 for research into the role of plasminogen activator in the destruction of human articular cartilage.
Information Studies – Professor M. F. Lynch – £32,200 from the British Library for studies on computer storage and retrieval of generic chemical formulae in patents.
Law – Professor N. Lewis – £11,420 from the Equal Opportunities Commission for studies on individual ACAS conciliation cases under the equal pay and sex discrimination legislation.
Mechanical Engineering – Professor K. J. Miller and Dr M. W. Brown – £206,903 from SERC for research into multiaxial fatigue; Professor J. K. Hoyle – £6,818 from the Ministry of Defence for a review of the current position on electro-rheological fluids; Mr W. A. Bullough and Dr D. J. Peel – £50,000 from the Wolfson Foundation for feasibility studies on Winslow effect fluids.
Medical Physics and Clinical Engineering – Professor M. M. Black, Dr J. P. Dmitry and Dr R. van Noort – £34,700 from SERC for research into the optimization of the biological stability and mechanical durability of bovine pericardium for biprosthetic cardiac valves; Professor M. M. – £30,473 from the British Heart Foundation for research into the manufacture and assessment of a biprosthetic mitral valve.
Medicine – Dr B. W. Hancock – £17,447 from the Yorkshire Cancer Research Campaign for research into natural cytotoxicity and response to interferon in malignant lymphoma.
Metallury – Dr D. H. Warrington, Dr H. A. Davies and Dr H. Jones £12,701 from SERC for research into the structure and properties of rapidly solidified super-alloys; Dr H. A. Davies – £31,750 from SERC for research into the structure and properties of rapidly quenched alloys; Professor G. Davies – £58,000 from the British Railways Board for cyclic deformation fatigue studies.
Microbiology – Professor J. R. Guest – £68,434 from SERC for research into the molecular biology of the succinate dehydrogenase of *Escherichia coli*.
Physics and Metallurgy – Dr N. Cowlan and Dr H. A. Davies – £25,900 from SERC for neutron diffraction studies of chemical and topological order in metallic glasses.
Physics – Professor T. R. Kaiser and Dr K. Bullough – £37,000 and £43,340 from SERC in supart of the AMPTE UK subsatellite wave experiment.
Physiology – Dr K. A. Clarke – £27,773 from the Wellcome Trust in support of an electrophysiological investigation of the role of 5-HT in the regulation of spinal mechanisms.
Psychology – Dr. C. Bradley – £72,305 from the Department of Health, Education and Welfare, Maryland, USA, for studies on improving diabetes control using feedback techniques.
Sociological Studies – Professor J. H. Westergaard and Mr A. C. Walker – £59,438 from SERC for a study of responses to unemployment in the Sheffield steel industry.
Virology – Professor C. W. Potter – £19,185 from the Yorkshire Cancer Research Campaign for studies on altered HLA antigens of human tumour cells.
Zoology – Professor J. N. Ball – £41,656 from SERC for research into functional interactions in the teleostean hypothalamo-hypophysial system; Dr P. G. Lillywhite – £33,791 from SERC for research into the processing of movement information on the fly's visual system.

Open University programmes March 20 to March 26

Saturday March 20

BBC1
6.55 Closedown
9.00 Contemporary issues in education. Can You Hear Me? (F202): prog 4
9.25 An ageing population. Work & Retirement (F252): prog 21
9.50 Schooling and society. Educating the Workforce (E202): prog 2
10.15 History of mathematics. Root 2 – Geometry or Arithmetic? (AM289): prog 2
10.40 Education, teachers and community relations. Collusion? In Review at Home Countries (E354): prog 3
11.05 Art and environment. Having Ideas by Handling Materials (TAD292): prog 11
11.30 Policies, people and administration. The Client (D336): prog 3
11.55 An introduction to calculus. Sin (alpha + beta) (MS283): prog 3
12.20 Learning to pure mathematics: Orthogonal Bases (M208): prog 10
12.45 The development of instruments and their music. Baroque Wind Instruments (A304): prog 3
1.10 Newspapers and education course. Dons on the Rates (T01): prog 4
1.35 Arts foundation course. Edinburgh Observed (A101): prog 5
2.00 Education and the urban environment. Too Busy to Play (E301): prog 2
2.25 Open Business School (OBS). Sources and historiography. Landscape, Maps and the Historian (A363): prog 7
2.50 Health, Distribution and society. The Anchor Book (DB333): prog 2
3.15 Chemistry. Why Build Models? (S246): prog 2
3.40 Science and belief: from Darwin to Einstein. Darwin and Religious Belief (A321): prog 00)
4.05 Mathematical models and methods. Differential Equations (M351/2): prog 6
4.30 An introduction to psychology. Is it as Easy as ABC? (D282): prog 2
4.55 Personality and learning. Finding Roots of Equations (M351): prog 1
5.20 Social sciences interdisciplinary approach. The Statistical Distribution (MDT241): prog 2
5.45 Personality and learning. Is it significant? (D301): prog 2
6.10 Britain 1688-1900. An Introduction: Castles, Cottages and Cathedrals (A321: prog 00)
6.35 Reading development. Context, Concept and Text (PE231): prog 2
7.00 Natural resources. Coal (S266): prog 3
7.25 Science organization: the management of complexity. Boundaries and Diseases (T243: prog 2)
7.50 Astronomy and molecular biology. Molecular Interstellar (S322: prog 4)
8.15 Mathematical Models. Geophysics' In the Forest Area (S254): prog 2)
8.40 Decision making in Great Britain. Using Broadcasting under Stress (D303): prog 6)
9.05 Health and society. Introduction to Aural Training (A241): prog 3)
9.30 Mathematics foundation course. Art and the Historian (M208): prog 11
9.55 Mathematics foundation course. Foundation Statistics (M101: prog 2)
10.20 Differential equations of spatial systems. Line and Surface Integrals (M321: prog 3)
10.45 Music: Introduction to Aural Training (A241): prog 3)

Sunday March 21

BBC1
8.25 History of architecture and design 1890–1939. Frank Lloyd Wright: The Robie House (A305: prog 5)
8.50 Man's religious quest. "The Wages of Action": Religion in a Hindu Village, Part I (AD208: prog 6B)
9.15 Economic modelling. Linear Programming: A Case Study (T341: prog 2)
9.40 Urban change and conflict. The Historical Legacy (D301: prog 2)
10.05 Microeconomics. Intervention in the Market (D222: prog 2)
BBC2
9.25 Images and information. Beyond the Eye (ST292): prog 3)
9.50 Graphs networks and design. Minimum Cost Flows (TM341: prog 3)
10.15 Technology foundation course. Dams on the Range (T101: prog 4)
10.40 The nature of chemistry. N.M.R. – The Theory and Technique (S304: prog 8)
11.05 Biochemistry and molecular biology. The Structure of Lysozyme (S322: prog 3)
11.30 Technology foundation course. Rockets and Magnets (S101: prog 3)
11.55 Life science foundation course. Turning it Round (D102: prog 6)
12.20 Mathematics foundation course. Doing Tutor-Marked Assignment (M101: prog 3A)
12.45 The digital computer. Data in the Computer (TM221: prog 3)
1.10 Acoustic processing. Mining (T353: prog 2)
1.35 Control of technology. Drugs: The Industry and the Regulators (T361: prog 2)
2.00 Biology: form and function. Enzyme Structure and Function (S202: prog 6)
2.25 Computing and computers. Computing at The Royal Bank of Scotland (PM252: prog 4)
2.50 Oceanography. Site 167, Deep Sea Drilling Project (S334: prog 3)
3.15 Industrial relations. Changing the Record (DD221: prog 4)
3.40 Physiology of cells and organisms. Active Transport (S321: prog 3)
4.05 Surface and sedimentary processes: case studies in earth science. Isotopes in Geology (S335: prog 1)
4.30 Discovering physics. Energy to go Round (S271: prog 3)
4.55 Language in use. Men, Women and Language (E265: prog 6)
5.20 Seventeenth century England: a changing culture 1618–1689. Portraiture: Part I (A263: unit 7)
5.45 Science and belief: from Darwin to Einstein. From Design to Elimination (A321: prog 3)
6.10 Mathematics foundation course. Acts of God? (M101: prog 2)
6.35 Science and belief: from Darwin to Einstein. Personality and Learning. How Vital are Statistics? (E201: prog 8)
7.00 Social science foundation course. Acts of God? (Amanya Sun) (D102: prog 3)
7.25 Technology foundation course. How Self-Sufficient? (T101: prog 4)
8.00 Ethnic minorities and community relations. Race and Religion in Britain 2 (E354: prog 3)
8.25 Computing and computers. Computing: Unit Processing and Peripherals (PM252: prog 1)
8.50 Friendship (PM252: prog 1)
9.15 The Enlightenment. Betty Langley (A206: prog 6)
RADIO 3 (VHF)
12.30 Management and the school. The Parents' Centre (E325: prog 4)
1.40 Rome: The Augustan Age. Lucretius & Prince Me Man (A295: prog 3)
2.00 Instrumentation. Magnetic Circuits (T291: prog 2)
00.30 Schooling and society. Bowles and Gintis Programme 2 (E202: prog 2)
00.40 Cognitive developmental: language and thinking from birth to adolescence. The Mind of a Child (E262: prog 2)

Monday March 22

BBC1
6.40 The Enlightenment. A Little Gothick Castle (A206: prog 7)
7.05 Mathematical models and methods. Maths Methods: Spring (MST204: prog 1)
7.30 The nineteenth century novel and its legacy. Charles Dickens – Childhood in Victoria Literature (A312: prog 3)
BBC2
6.40 Mathematics foundation course. Doing Tutor-Marked Assignment (M101: prog 3A)
7.05 Technology foundation course. Dams on the Range (T101: prog 4)
7.30 Computing and computers. Computing: Sequences, Arrays (M252: prog 2)
17.10 Contemporary issues in education. Can You Hear Me? (E202: prog 4)
RADIO 3 (VHF)
8.58 Research methods in education and the social sciences. Social Class (DE304: prog 6)
6.15 Man's religious quest. A Hindu Testimony (AD208: prog 5)
6.38 Fundamentals of business geography. Dartmoor; Mining and Military (D284: prog 2)
22.30 Arts foundation course. Studying Literature (A101: prog 6)
23.40 Technology foundation course. How Self-Sufficient? (T101: prog 4)
24.00 Computing and computers. Computing at Social Change (PT281: prog 3)
00.05 Computing and computers. Experiments in Social Psychology (D303: prog 3)
RADIO 4 (VHF)
23.30 The rise of modernism in music. The Influence of Debussy's Style (A308: prog 3)

Tuesday March 23

BBC1
6.40 Seventeenth century England: a changing culture 1618–1689. Court Patronage (A263: prog 8)
7.30 Food production systems. Farming: Organic or Intensive (T233: prog 2)
BBC2
6.40 Introductory electronics. Frequency Response (T283: prog 2)
7.05 Technology foundation course. Drifting Continents (S101: prog 6)
7.30 The handicapped person in the community. Due Care and Attention (P251: prog 2)
17.10 An ageing population. Work and Retirement (F252: prog 5)
RADIO 3 (VHF)
8.58 Elements of music. Introduction to Aural Training (3) (A241: prog 3)
6.15 Management and the school. The Parent's Centre (E325: prog 4)
9.35 Thought and reality. Scottish theories in Wittgenstein's philosophy. Russell's Logical Atomism (A402: prog 3)
23.20 Environmental control and public health. Deodorization – Yes or No (PT272: prog 2)
23.40 Art and environment. Everyday Sound Worlds (TAD292: prog 4)
24.00 History of architecture and design 1890–1939. Frank Lloyd Wright: The Robie House (A305: prog 5)
00.30 Schooling and society. Bowles and Gintis Programme 2 (E202: prog 2)
00.40 Cognitive developmental: language and thinking from birth to adolescence. The Mind of a Child (E262: prog 2)

Wednesday March 24

BBC1
6.40 Oceanography. Site 167, Deep Sea Drilling Project (S334: prog 3)
7.05 Evolution. Early Life Tracks and Traces (S364: prog 4)
7.30 Biology, brain and behaviour. Psychology: Questions of Behaviour (SD280: prog 3)
BBC2
6.40 Introduction to pure mathematics. Lagrange's Theorem (M208: prog 6)
7.05 Arts foundation course. Interpreting a Dream (A101: prog 6)
7.30 Contemporary issues in education. Can You Hear Me? (E202: prog 4)
17.10 Schooling and society. Educating the Workforce (E202: prog 3)
RADIO 3 (VHF)
8.55 Principles of chemical processes. Fuel Cells (T292: prog 1)
6.15 Man's religious quest. A Hindu Testimony (AD208: prog 5)
6.38 The role of modernism in music. The influences on Debussy's Style (A308: prog 3)
23.30 Social science foundation course. Acts of God? (Amanya Sun) (D102: prog 3)
23.40 Reading development. Cloze Procedure (PE231, prog 2)
24.00 Curriculum design and development. The Baby on Black Kids (E363: prog 3)
00.30 Twentieth century poetry. Poetry and the First World War (A307: prog 3)
00.40 The Enlightenment. Betty Langley (A264: prog 6)
RADIO 4 (VHF)
23.30 Seventeenth century England: a changing culture 1618–1689. Portraiture: Part I (A263: prog 7)
23.55 Personality and learning. Reward Preferences (E201: prog 6)

Thursday March 25

BBC1
6.40 An introduction to psychology. Is it as Easy as ABC? (SD282: prog 2)
7.05 Graphs, networks and design. Minimum Cost Flows (TM341: prog 3)
7.30 Engineering mechanics: thermofluids and energy. Carnot and Sterling Cycles (T232: prog 2)
BBC2
6.40 The earth, structure, composition and evolution. Crust and Mantle (S257: prog 2)
7.05 Social science foundation course. Turning it Round (D102: prog 6)
7.30 Chemical and material processes: case studies in earth science. Isotopes in Geology (S336: prog 2)
17.10 History of architecture and design 1890–1939. Frank Lloyd Wright: The Robie House (A305: prog 5)
RADIO 3 (VHF)
8.58 Greece 378–338 BC. Democracy and Oligarchy: The Athenian Experience (A293: prog 3).
6.15 The digital computer. Answering CMA (TM221: prog 3)
6.38 An introduction to calculus. What is a Function? (MS283: prog 2)
23.20 Science foundation course. The Reaction to Wegener (S101: prog 3)
23.40* Materials under stress. Structural Analysis (T351: prog 2)
24.00* Schooling and society. Bowles and Gintis Programme 2 (E202: prog 2)
00.30 Man's religious quest. Devotional Hinduism (AD208: prog 2)
00.40 Decision making in Britain. Why Do We Keep the Law? (D303: prog 3)
RADIO 4 (VHF)
23.30 OU Announcements/Music Interlude
23.50 Permutations of unrelated letters. Choosing + Probability Distribution (M341: prog 2)

Friday March 26

BBC1
6.40 Urban change and conflict. The Historical Legacy (D301: prog 2)
7.10 History of mathematics. Root 2 – Geometry or Arithmetic? (AM289: prog 2)
BBC2
9.40* Biology: form and function. Enzyme Structure and Function (S202: prog 6)
7.05* Arts foundation course. Interpreting a Dream (A101: prog 6)
7.30* Statistics: an interdisciplinary approach. The Binomial Distribution (MDT241: prog 3)
17.10 Man's religious quest. "The Wages of Action": Religion in a Hindu Village, Part II (AD208: prog 6C)
17.35 Weekend Outlook – 7
RADIO 3 (VHF)
8.55* Curriculum design and development. The Baby Street Kids (E203: prog 5).
6.15* Integrated circuits. Magnetic Circuits (T291: prog 2)
6.38* Cognitive development: language and thinking from birth to adolescence. The Mind of a Child (E362: prog 2)
23.30 Integrated circuits. Organic Chemistry: CMA 11 (S246: prog 1)
23.40* Language in use. Men, Women and Language (E365: prog 6)
24.00* Computer analysis. Continuous Functions and Compact Sets (M332: prog 1)
00.20* An introduction to calculus. What is a Function? (MS283: prog 2)
00.40* History of architecture and design 1890–1939. Ferro-Concrete: Hennebique to Perret (A305: prog 6)

*repeated programmes

Conference

Themes in Drama
Annual Conference
DRAMA AND THE ACTOR
April 2, 3, 4, Dept. of Drama, Westfield College, University of London, NW3. Tel: (01) 435 7141, ext. 476.

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The Advertisement Manager, The Times Higher Education Supplement, P.O. Box 7, New Printing House Square, Gray's Inn Road, London WC1X 8EZ. Tel. 01-837 1234.

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Universities

AUSTRALIA

Applications are invited for the following posts, for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Professor $A43,804; Lecturer $A20,063–$A27,539; Senior Tutor $A18,068–$A20,699.
Further details and application procedure may be obtained from The Association of Commonwealth Universities (Appts), 36 Gordon Square, London WC1H 0PF unless otherwise stated.

The University of Sydney
CHAIR OF LAW
Applications are invited for a Chair in the Faculty of Law.
30 April 1982

LECTURESHIP IN VETERINARY ANATOMY
Applicants must be graduates in Veterinary Science. The appointee may be required to teach in any area of Veterinary Anatomy but a special interest in the anatomy of horses would be an advantage.
The position is expected to be filled by a probationary appointment of three years, capable of leading to tenure but, if at the University's requirements for tenure are deemed to be satisfactorily met, tenure may be granted at the time of appointment. The University reserves the right not to proceed with any appointment for financial or other reasons.
7 May 1982

LECTURESHIP IN ANIMAL HUSBANDRY IN THE FIELD OF ANIMAL REPRODUCTION
Dept. of Animal Husbandry
Candidates should have a Ph.D degree, postdoctoral experience and experience in farm animals.
The successful applicant will be stationed in Sydney, where there are good laboratory and animal housing facilities, and will be required, under the supervision of the Head of Department, Professor T.J. Robinson, to conduct classes in Animal Reproduction and, where required, in other fields in animal science. The appointee will be expected to take up duties in August, 1982.
Fixed term for three years from date of appointment. The University reserves the right not to proceed with any appointment for financial or other reasons.
22 April 1982

The Australian National University
POSTDOCTORAL FELLOW OR RESEARCH FELLOW IN MATHEMATICS
Research School of Physical Sciences
The Department of Mathematics in the Research School (Head: Professor D.W. Robinson) has an academic staff complement of 17 and is carrying out research in the following areas: Operator Algebras and Mathematical Physics, Partial Differential Equations and Geometry, viz. Group Theory, Lie Groups and Algebraic Groups, Global Analysis, Ordinary Differential Equations and Control Theory, and Foundations.
Appointment will be from late 1982.
Conditions of Appointment: Salary will be in accordance with qualifications and experience within the ranges: Research Fellow $A20,963–$27,539; Postdoctoral Fellow Grade 2 $20,963–$27,539; Postdoctoral Fellow Grade 1 $A18,068–$20,699.
Appointment will be: Research Fellow up to 3 years with the possibility of extension, after review, to 5 years; Postdoctoral Fellow up to 2 years with possibility of extension to 3 years.
Reasonable appointment expenses are paid and assistance with housing is given for an appointee from outside Canberra.
Superannuation benefits are available for applicants who are eligible to contribute.
The University reserves the right not to make an appointment or to make an appointment by invitation at any time.
30 June 1982

University of Western Australia, Perth
VISITING FACULTY POSITIONS IN PHYSICS
Department of Physics
Several temporary fractional positions may be available in future years for persons with active research interests. Teaching a course of 18 to 27 lectures is normally required. Persons on sabbatical leave are encouraged to apply.
Departmental research interests include gravitational radiation, atomic collisions, x-ray crystallography, soft x-ray and mass spectrometrics, photonuclear reactions, recrystallization and reorientation in ice, cochlea mechanics, rock magnetism and theoretical cosmic electrodynamics, pulsar magnetospheres and high energy physics.
The Department has excellent modern mechanical and electronic workshops, liquid helium, computing and electron microscope facilities. Perth enjoys an excellent climate.
Initial enquiries with resumé and research interests to Professor J. Williams, Department of Physics, University of Western Australia, Nedlands, Western Australia 6009.

SENIOR TUTOR IN ITALIAN
Applications are invited from graduates with a first-class honours or a higher degree in Italian. The appointment would be for the academic year commencing in January or February 1983 with the possibility of renewal for a further two years. The appointee will be required to undertake language teaching throughout the degree structure, and share in the teaching of literature at most levels.
Benefits include superannuation, fares to Perth for appointee and dependent family and removal allowance. Conditions of appointment will be specified in any offer of appointment which may be made as a result of this advertisement.
Applications in duplicate stating full personal particulars, qualifications and experience should reach the Staffing Officer, University of Western Australia, Nedlands, Western Australia 6009. Candidates should request three referees to write immediately to the Staffing Officer.
24 April 1982

UNIVERSITY OF DUBLIN
Trinity College

Applications are invited for the following appointments in the Faculty of Engineering and Systems Sciences at Trinity College, Dublin. Appointments will be tenable from 1st October, 1982.

LECTURERS IN COMPUTER SCIENCE
Candidates should hold a degree in Computer Science or closely related disciplines. The activity of the Department is wide-ranging and includes both day and evening degree courses.

LECTURER IN CIVIL ENGINEERING
Candidates should have an interest in one of the main branches of Civil Engineering; practical experience would be advantageous.

LECTURER IN MECHANICAL ENGINEERING AND LECTURER IN MANUFACTURING ENGINEERING
Candidates for these posts should, preferably, hold a higher degree in Engineering; some industrial experience would be desirable. No area of specialization will be excluded from consideration.

SENIOR LECTURER and LECTURER IN MICROELECTRONICS & ELECTRICAL ENGINEERING
Preference in both these appointments will be given to candidates holding a degree in Electronic or Electrical Engineering. Some industrial experience would be desirable. Applications would be particularly welcome from candidates with interests in microelectronics design, including experience with computer programming, telecommunications or vision systems.

SCALE SCALE: Senior Lecturer: IR£13,059–£16,983 per annum.
Lecturer: IR£7,006–£14,557 per annum.
Lecturers will be appointed within the salary range IR£7,006–£9,786 per annum, at a point commensurate with qualifications and experience to date.
Application forms and further particulars relating to these appointments may be obtained from:

The Establishment Officer
Staff Office
Trinity College
Dublin 2
Tel: 772942, Ext. 1776

The closing date for receipt of completed applications will be 16th April, 1982.

UNIVERSITY OF GEZIRA
Sudan

Applications are invited for the following posts:

FACULTY OF SCIENCE AND TECHNOLOGY

1. PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN FOOD TECHNOLOGY.
2. PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN SUGAR TECHNOLOGY.
3. PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN TEXTILE TECHNOLOGY.
4. PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN BUILDING SCIENCE AND TECHNOLOGY.
5. PROFESSOR/ASSOCIATE PROFESSOR IN APPLIED PHYSICS/ELECTRONICS/INSTRUMENTATION.
6. PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN APPLIED CHEMISTRY/CHEMICAL TECHNOLOGY.
7. PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN PHYSICAL CHEMISTRY.

PREPARATORY COLLEGE (Level of teaching is comparable to GCE 'A' level).

PROFESSOR/ASSOCIATE PROFESSOR/LECTURER IN PURE MATHEMATICS/APPLIED MATHEMATICS. The appointee may be required to undertake additional service teaching in the Faculty of Science and Technology.
It is hoped that interviews for the above posts will be held during the third week of June.
Salary Scales: Professor £38,111 pa. Associate Professor £33,960–6,749 pa. Lecturer £23,171–5,377 pa. 2 or 3 year renewable contract; family passages; free housing; annual overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to Dr P. G. N. Moseley, Dean of the Faculty of Science and Technology, University of Gezira, PO Box 20, Wad Medani, Sudan, to arrive no later than 14 May, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF DURHAM

CHAIR IN THE DEPARTMENT OF SOCIOLOGY & SOCIAL POLICY

Applications are invited for a Chair in the Department of Sociology and Social Policy to be held from October 1982. The person appointed will be required to teach in any of the areas of Sociology or Social Policy.
The appointment is being made following the death of Professor P. Abrams.
The appointment will be made on the Professorial 1981 scale (£18,816–£20,163) per annum inclusive of USS superannuation arrangements.
Applications (three copies) including the names of three referees must be submitted by 14 April 1982 to the Registrar and Secretary, 3rd Shire Hall, Durham DH1 3HP, from whom further particulars may be obtained.
Closing date 16 April 1982.

LONDON IMPERIAL COLLEGE

LECTURESHIP IN SOLID STATE THEORY

Lecturer in Solid State Theory required for an initial period of 5 years in the Department of Physics at Imperial College with duties to the area of specialisation and terms of appointment to be negotiated. Initially to be held with a Visiting Fellowship, with a Visiting Fellowship, with effect from 1st October 1982 or as soon thereafter as possible.
Further information is available from the Head of Solid State Theory Group, Dr. Alan Bishop, Imperial College, London SW7 2BZ (telephone 01-589 5111 ext. 2854) to whom applications should include a curriculum vitae, the names of two referees, and a statement of the applicant's research interests. Plans for future research.
Closing date 16 April 1982.

UNIVERSITY OF DAR ES SALAAM
Tanzania

Applications are invited for the following posts in the Faculty of Engineering:

DEPARTMENT OF CIVIL ENGINEERING

1. ASSOCIATE PROFESSOR/SENIOR LECTURER/ LECTURER in Engineering Mechanics and Structural Engineering.
2. SENIOR LECTURER/LECTURER in Transportation Engineering.
3. ASSOCIATE PROFESSOR/SENIOR LECTURER in Hydraulic Engineering.
4. ASSOCIATE PROFESSOR/SENIOR LECTURER in Water Supply and Sanitary Engineering.
5. ASSOCIATE PROFESSOR/SENIOR LECTURER/ LECTURER in Construction Management.

DEPARTMENT OF MECHANICAL ENGINEERING

1. PROFESSOR/SENIOR LECTURER in Machine Design.
2. PROFESSOR/SENIOR LECTURER/LECTURER in Engineering Mechanics.
3. PROFESSOR/SENIOR LECTURER in Materials Technology.
4. SENIOR LECTURER/LECTURER in Production Engineering – Metal Cutting.
5. SENIOR LECTURER/LECTURER in Automotive Engineering.

DEPARTMENT OF ELECTRICAL ENGINEERING

1. PROFESSOR/SENIOR LECTURER in Control and Measurement.
2. PROFESSOR/SENIOR LECTURER in Power Distribution and Transmission.
3. PROFESSOR/SENIOR LECTURER in Telecommunication and Electronics.

DEPARTMENT OF CHEMICAL AND PROCESS ENGINEERING

SENIOR LECTURER/LECTURER/ASSISTANT LECTURER in Chemical or Process Engineering.
Appointees must have qualifications and teaching and research experience commensurate with the level of appointment.
Salary scales: Professor Tz.Sh.62,100 pa. Associate Professor Tz.Sh.60,780 pa. Senior Lecturer Tz.Sh.54,780–59,340 pa. Lecturer Tz.Sh.44,400–62,340 pa. Assistant Lecturer Tz.Sh.35,640–42,840 pa. Appointees on expatriate terms will be entitled to an Expatriation Allowance of 50% of their basic salaries. (£1 sterling = Tz.Sh. 15.12.) In very exceptional circumstances, the British Government may provide salary supplementation in range £8,756–11,520 pa. (sterling) for married appointees or £5,040–9,798 pa. (sterling) for single appointees (reviewed annually – normally tax-free) and associated benefits. Family passages; F.S.B.U.; biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania, to arrive no later than 30 April, 1982. Applicants resident in the UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF DAR ES SALAAM TANZANIA

Applications are invited for the following posts in the Faculty of Agriculture, Forestry and Veterinary Science:

1. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER/LECTURER IN ANIMAL SCIENCE (Pasture Production and Utilisation).
2. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER/LECTURER IN ANIMAL SCIENCE (Pig or Poultry Production).
3. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER/LECTURER IN ANIMAL SCIENCE (Dairy Science).
4. PROFESSOR IN AGRICULTURAL EDUCATION AND EXTENSION (Rural Sociology).
5. SENIOR LECTURER/LECTURER/ASSISTANT LECTURER IN AGRICULTURAL ECONOMICS (Economic Planning and Project Appraisal).
6. SENIOR LECTURER/LECTURER/ASSISTANT LECTURER IN AGRICULTURAL ECONOMICS (Economic Theory and Livestock Economics).
7. SENIOR LECTURER/LECTURER/ASSISTANT LECTURER IN AGRICULTURAL ECONOMICS (Statistics and Operational Research).
8. ASSOCIATE PROFESSOR IN FOOD SCIENCE AND TECHNOLOGY (any area).
9. PROFESSOR IN FOOD SCIENCE AND TECHNOLOGY (any area).
10. SENIOR LECTURER IN FOOD SCIENCE AND TECHNOLOGY (Food Engineering or Food Manufacturing/ Processing).
11. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER/LECTURER IN AGRICULTURAL ENGINEERING AND LAND PLANNING (Agricultural Process Engineering; Agricultural Machinery Engineering; Soil and Water Engineering; Rural Structures and Services).
12. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER IN SOIL SCIENCE (Pedology/Soil Survey and Classification).
13. PROFESSOR/ASSOCIATE PROFESSOR/SENIOR LECTURER IN CROP SCIENCE (Cytogenetics and Plant Breeding).
14. LECTURER IN CROP SCIENCE (Biometry/Biostatistics).
15. PROFESSOR/ASSOCIATE PROFESSOR AND SENIOR LECTURER AND LECTURER IN VETERINARY OBSTETRICS AND REPRODUCTION.
16. PROFESSOR/ASSOCIATE PROFESSOR AND SENIOR LECTURER AND LECTURER IN VETERINARY SURGERY, OBSTETRICS AND REPRODUCTION (SURGERY).
17. PROFESSOR/ASSOCIATE PROFESSOR IN VETERINARY PATHOLOGY.
18. PROFESSOR AND SENIOR LECTURER AND LECTURER AND ASSISTANT RESEARCH FELLOW IN VETERINARY ANATOMY.

Applicants must have qualifications and teaching and research experience commensurate with the level of appointment.
Salary scales: Professor Tz.Sh. 62,100 pa. Associate Professor Tz.Sh. 60,780 pa. Senior Lecturer Tz.Sh. 54,780–59,340 pa. Lecturer Tz.Sh. 44,400–52,340 pa. Assistant Lecturer/Assistant Research Fellow Tz.Sh. 35,640–42,840 pa. Appointees on expatriate terms will be entitled to an Expatriation Allowance of 50% of their basic salaries. (£1 sterling = Tz.Sh. 15.12.) In very exceptional circumstances, the British Government may provide salary supplementation in range £8,756–11,520 pa. (sterling) for married appointees or £5,040–9,798 pa. (sterling) for single appointees (reviewed annually – normally tax-free) and associated benefits. Family passages; F.S.B.U.; biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania, to arrive no later than 30 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF DAR ES SALAAM – TANZANIA

Applications are invited for the following posts:

1. SENIOR LECTURER/LECTURER IN ZOOLOGY (Wildlife Ecology/Population Ecology).
2. SENIOR LECTURER/LECTURER IN ZOOLOGY (Marine Biology – Fish Taxonomy/Benthic Ecology).
3. SENIOR LECTURER/LECTURER IN ZOOLOGY (Marine Biology – Fisheries Biology, especially in the area of fish stock assessment and fish population dynamics).
4. SENIOR RESEARCH FELLOW IN MARINE SCIENCE (Marine Biology).
5. RESEARCH FELLOW IN MARINE SCIENCES (Physical Oceanography).
6. ASSISTANT RESEARCH FELLOW IN MARINE SCIENCES (Fisheries Biology with interest in fish population dynamics).
7. SENIOR LECTURER IN BOTANY (Plant Ecology).

Applicants must have qualifications and teaching and/or research experience commensurate with the level of appointment.
Salary scales: Senior Lecturer/Senior Research Fellow Tz.Sh. 54,780–59,340 pa. Lecturer/Research Fellow Tz.Sh. 44,400–52,340 pa. Assistant Research Fellow Tz.Sh. 35,640–42,840 pa. Appointees on expatriate terms will be entitled to an Expatriation Allowance of 50% of their basic salaries. (£1 sterling = Tz.Sh. 15.12.) Family passages; F.S.B.U.; biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania, to arrive no later than 30 April, 1982. Applicants resident in the UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF KHARTOUM
SUDAN

Applications are invited for the following posts in the Faculty of Education:

1. DEPARTMENT OF PHYSICS
   1.1 PROFESSOR/ASSOCIATE PROFESSOR/LECTURER in Solid State Physics
   1.2 PROFESSOR/ASSOCIATE PROFESSOR/LECTURER in Nuclear Physics
   1.3 PROFESSOR/ASSOCIATE PROFESSOR/LECTURER in Theoretical Physics.
2. DAPARTMENT OF BIOLOGY
   2.1 PROFESSOR/ASSOCIATE PROFESSOR in Zoology (Systematic Vertebrates, Embryology and Evolution)
   2.2 PROFESSOR/ASSOCIATE PROFESSOR in Zoology (Invertebrates, Parasitology and/or Comparative Anatomy).
3. DAPARTMENT OF CHEMISTRY
   3.1 PROFESSOR/ASSOCIATE PROFESSOR/LECTURER in Physical Chemistry – Theoretical Chemistry (Wave Mechanics, Theories of Bonding, Spectroscopy)
   3.2 PROFESSOR/ASSOCIATE PROFESSOR/LECTURER in Organic Chemistry.

Salary scales: Professor £98,111 pa. Associate Professor £85,960–8,749 pa. Lecturer £83,171–5,377 pa. Family passages; baggage allowance; superannuation scheme; unfurnished accommodation; various allowances. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Personnel Secretary, University of Khartoum, PO Box 321, Khartoum, Sudan, to arrive no later than 23 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF PAPUA NEW GUINEA

Applications are invited for the following posts in the Department of Economics:

1. SENIOR LECTURER/LECTURER IN ECONOMICS. The appointee will be largely engaged in the teaching of econometrics and quantitative economics, economic theory, and other optional courses. Preference will be given to candidates with a PhD Degree in economics and extensive teaching and research experience in quantitative economic analysis. Teaching experience in a Third World country will be an advantage.
2. SENIOR LECTURER/LECTURER IN ACCOUNTING. The appointee will be engaged in the teaching of Intermediate and Advanced Accounting, Auditing and Taxation. Preference will be given to applicants with MBA/CA/CMA or higher qualification, but Masters (Accounting Major) or CPA, CMA, CA etc will be considered. Teaching, Research and Professional experiences, particularly in a Third World country will be an advantage. The appointee will be expected to liaise closely with the profession.

Salary scale: Senior Lecturer: K18,195 pa. Lecturer Grade II: K16,345 pa. Lecturer Grade I: K14,495 pa. (£1 sterling = K1.30). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months' service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming 3 referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University PO, Papua New Guinea to arrive no later than 30 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF PAPUA NEW GUINEA
(Port Moresby)

Applications are invited for the post of SENIOR LECTURER/ LECTURER IN CROP BOTANY in the Department of Agriculture. Applicants should have a good first degree in Agriculture or Horticulture with postgraduate experience in Crop Physiology or Crop Botany preferably at a PhD level. Preference will be given to applicants with University teaching and research experience in tropical agriculture. The appointee will be responsible for undergraduate courses in Crop Botany, Crop Physiology and/or Agricultural Ecology, and also for Honours Courses within his or her field of competence. He/she will be expected to supervise post/graduate students and to carry out independent research. Currently the Department of Agriculture is split between Port Moresby and Lae; but it is envisaged that in due course it may be unified at Lae. Salary scales: Senior Lecturer K18,195 pa. Lecturer Grade II K16,345 pa. Lecturer Grade I K14,495 pa. (£1 sterling = K1.30. Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months' service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming 3 referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University PO, Papua New Guinea to arrive no later than 30 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

THE UNIVERSITY OF AUCKLAND
New Zealand
CONSERVATORIUM OF MUSIC

Full-Time Teacher of Piano
3 YEAR TERM
Closing Date: 30 April 1982

Half-Time Teacher of Viola
3 YEAR TERM
Closing Date: 16 April 1982

Duties for both positions will include teaching students enrolled for the Diploma in Music, and the Degrees of Bachelor of Music (Performance) and Master of Music courses; teaching students accepted for a course of instruction in a single subject; general practical assistance with Diploma and Degree courses where required; assistance with the administration of the Conservatorium and departmental extra-curricular activities for the development of music both within the University and the community; participation in University concerts given by the University Music Group (performance teaching staff).
Commencing salaries will be determined in accordance with qualifications and experience within the scale for Lecturers. At present the full time rates are NZ$21,660–25,684 per annum. Conditions of Appointment and Method of Application are available from the Assistant Registrar (Academic Appointments), University of Auckland, Private Bag, Auckland, New Zealand, or the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Applications in accordance with 'Method of Application' should be forwarded by the closing dates stated.

UNIVERSITY OF WESTERN AUSTRALIA
Perth

Senior Lecturer in Fine Arts

Applications are invited for the above position in the Faculty of Arts. The appointment will be for a term of five years with some prospects of continuation.
Applicants must hold a higher degree and have appropriate experience in one or more of: Italian Renaissance Art and French, British and Australian Art of the Eighteenth, Nineteenth and Twentieth Centuries. This is a new position and the appointee will be expected to plan and mount a suitable unit or pair of half units to be offered at the second year level to students enrolled for the Bachelor of Arts degree. Technical and secretarial support will be available. The position is available immediately and should be taken up as soon as possible with a view to the commencement of teaching in 1983. Current salary range: $A28,127–$32,783 per annum. Benefits include superannuation, fares to Perth for appointee and dependent family and removal allowance. Further information available from the Staffing Officer, in the University, or from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Conditions of appointment will be specified in any offer of appointment which may be made as a result of this advertisement.
Applications in duplicate stating full personal particulars, qualifications and experience should reach the Staffing Officer, University of Western Australia, Nedlands, Western Australia 6009, by *17 April, 1982*. Candidates should request three referees to write immediately to the Staffing Officer.

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

Chair of Forestry

Applications are invited for the position of Professor and Head of the Department of Forestry in the University of Technology, Lae, which will fall vacant in July 1982.
The successful candidate will be responsible for continuing the development of the Forestry degree course, for the formulation and carrying out of an applied research program in the Department, and for maintaining the closest links with the national forest service and with the forest-based industry.
Applicants should have a postgraduate qualification and considerable experience and expertise in forestry, with appropriate teaching, research and administrative experience. Academic and research calibre should be demonstrated adequately by publications and other forms of professional output.
Salary: K21,295 (K1 = Stg. 0.7517).
Initial contract period is for three years; other benefits include a gratuity of 24% taxed at 2%, appointment and repatriation fares, leave fares for the staff member and family after 18 months of service, settling-in and out allowance, six weeks paid leave per year, education fares and assistance towards school fees, free housing. Salary continuation and medical benefit schemes are available.
Applications, which should comprise a full curriculum vitae, including particulars of age, nationality, marital status, dependants, qualifications, experience, publications and also the names and addresses of three referees, should be received by: The Registrar, Papua New Guinea University of Technology, PO Box 793, Lae, Papua New Guinea, by *18 April, 1982*.
Applicants resident in the United Kingdom should also send one copy to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

LONDON
CITY UNIVERSITY

CENTRE FOR BANKING AND INTERNATIONAL FINANCE

SENIOR RESEARCH FELLOWSHIP
MONETARY HISTORY

Applications are invited from October 1982 for the tenure of a Senior Research Fellowship in Monetary History, tenable by a graduate of British nationality attached to the SSRC financed Monetary History Project.
Further details and application forms may be obtained from Mrs. M. Collins, The Secretary, Banking Faculty Centre, Department of Economics, City University, Northampton Square, London EC1V 0HB. Completed applications to reach the Secretary by 1st April 1982.

OXFORD
UNIVERSITY OF JAPAN INSTITUTE
St. Antony's College

Nissan Lectureship in the Economics and Social Development of Contemporary Japan

Applications are invited for a lectureship in the above subject, tenable for three years from October 1982 or such other date as may be agreed. The successful candidate will be required to undertake teaching and research in the field of the lectureship, and to participate in the activities of the Japan Centre for Area Studies. The stipend will be in the range £6,756–£11,520 per annum (under review) according to qualifications and experience.
Further particulars and application forms may be obtained from the Warden of St. Antony's College, Oxford OX2 6JF, to whom applications (ten copies) should be sent by 1st April 1982.

Universities continued

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

Professor and Head of Department of Surveying

Applications are invited from suitably qualified persons for the above position.

Applicants must have high academic qualifications and should have significant experience, in the following areas: industry, tertiary institutions and research. Applicants may be from any area of surveying, cartography and valuation at undergraduate and postgraduate level.

The appointee will be expected to take an active part in teaching, provide leadership in research and be involved in university administration and professional activities.

The appointee will be expected to take up duty as soon as possible.

Salary: K21,292 per annum (K1.00 = Stg. 0.7517).

Initial contract period, three years; other benefits include a gratuity equal to 24% taxed at 2% rate, appointment, repatriation and leave fares for staff member and family after 18 months of service, settling-in and out allowance, six weeks paid leave per year, education fares and assistance towards school fees, free housing. Salary continuation and medical benefit schemes are available.

Detailed applications, together with the names and addresses of three referees, should be received by: The Registrar, Papua New Guinea University of Technology, PO Box 793, Lae, Papua New Guinea, by *23 April, 1982*.

Applicants resident in the United Kingdom should also send one copy to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY
Clinic Centre

Medical Officer (General Practitioner)

Applications are invited for the above position of the University of Technology.

Applicants should be experienced general medical practitioners preferably with some experience in tropical medicine.

The University Clinic provides medical services for approximately 3,000 people including students, national and expatriate staff and their families. Trained nursing staff and well equipped clinic.

Salary: K18,195–K20,195 per annum (K1 = Stg. 0.7581).

Initial contract period is for 3 years; other benefits include a gratuity of 24% taxed at 2%, appointment and repatriation fares, leave fares for the staff member and family after 18 months of service, settling-in and out allowance, six weeks paid leave per year, education fares and assistance towards school fees, free housing. Salary continuation and medical benefit schemes are available.

Detailed applications (two copies) with curriculum vitae together with the names and addresses of three referees should be received by: The Registrar, Papua New Guinea University of Technology, PO Box 793, Lae, Papua New Guinea, by *18 April, 1982*. Applicants resident in the United Kingdom should also send one copy to the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

UNIVERSITY OF HONG KONG

Lectureship in Analytical Chemistry

Applications are invited for a post of Lecturer in Analytical Chemistry in the Department of Chemistry. Candidates should have experience of teaching analytical chemistry at university level and have specialised interest in the field. Experience of applications of analytical chemistry in industry would be an advantage.

The appointee will be expected to teach in an area outside of analytical chemistry but not necessarily at a high level.

Annual salary (superannuable) is: HK$112,980 × 7,620–128,220 BAR 135,840 × 7,920–173,040–181,500–189,060 (£1 = HK$10.80 approx.). Starting salary will depend on qualifications and experience.

At current rates, salaries tax will not exceed 15% of gross income. Housing benefits at a rental of 7½% of salary, education allowance, leave and medical benefits are provided.

Further information and application forms may be obtained from the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, or from the Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong.

The closing date for applications is *30 April, 1982*.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

Lectureship in Drama

Applications are invited from suitably qualified persons for a three year appointment as lecturer in the Department of English and Drama. The person appointed will be required to contribute to the general teaching programme of the department. Competence in 20th century drama is necessary plus a specialism in classical, 18th century or 19th century drama.

The appointment will be made within the lower half of the scale £6,070 to £12,860. Further details and application forms from Paul Johnson, Establishment Officer, ref. 82/10 EA.

Loughborough Leicestershire

UNIVERSITY OF DUBLIN Trinity College

LECTURER IN LINGUISTICS

Applications are invited for the above post in the Centre for Language and Communication Studies, Trinity College, Dublin.

Salary Scale: IR£7,006–£14,857 per annum.

Appointment will be made at a point commensurate with the qualifications and experience to date of the successful applicant, within the salary range IR£7,006–£9,894 per annum.

Application forms and further particulars relating to this post may be obtained from:

The Establishment Officer
Staff Office
Trinity College
Dublin 2
Tel: 772941, Ext. 1776

The closing date for receipt of applications will be Friday, 16th April, 1982.

UNIVERSITY OF KHARTOUM – SUDAN

Applications are invited for the following posts in the DEPARTMENT OF BUSINESS ADMINISTRATION:

1) 2 PROFESSORS/ASSOCIATE PROFESSORS/LECTURERS IN ACCOUNTANCY AND/OR FINANCIAL MANAGEMENT.
2) 2 PROFESSORS/ASSOCIATE PROFESSORS/LECTURERS IN OPERATIONS RESEARCH, QUANTITATIVE METHODS AND/OR PRODUCTION MANAGEMENT.
3) 2 PROFESSORS/ASSOCIATE PROFESSORS/LECTURERS IN MARKETING AND/OR MANAGEMENT.

Salary Scales: Professor £88,111 pa. Associate Professor £55,960–4,749 pa. Lecturer £33,171–5,377 pa. Family passages; baggage allowance; superannuation scheme; unfurnished accommodation; various allowances. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Personnel Secretary, University of Khartoum, PO Box 321, Khartoum, Sudan, to arrive no later than 22 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF KHARTOUM – SUDAN

Applications are invited for 2 posts of PROFESSOR/ASSOCIATE PROFESSOR/LECTURER in SCHOOL OF MATHEMATICAL SCIENCES. Applicants with interests in the modern applications of Mathematical Sciences (in applications to Agriculture, Medical, Environment, economics ... etc) will be preferred. Applicants from pure mathematicians who are interested in work with Mathematicians in their applications will also be considered. Applications from Mathematical Statisticians will also be considered. Salary scales: Professor £88,111 pa. Associate Professor £55,960–4,749 pa. Lecturer £33,171–5,377 pa. Family passages; baggage allowance; superannuation scheme; unfurnished accommodation; various allowances. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Personnel Secretary, University of Khartoum, PO Box 321, Khartoum, Sudan, to arrive no later than 22 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF THE WEST INDIES – TRINIDAD

Applications are invited for the post of LECTURER / ASSISTANT LECTURER IN THE DEPARTMENT OF ECONOMICS. Applicants should have teaching and research interest in two or more of the following areas: econometrics, theory, basic mathematics and economic statistics, Caribbean Economic Problems, Elementary Econometrics, History of Economic Analysis, International Economics, Labour Economics, Monetary Economics, Public Finance, Political Economy of Planning and Transport Economics. Courses in Energy Economics, Economics of Technology and Public Sector Economics may be introduced in the Department. Salary scales (to be reviewed): Lecturer TT$29,784–43,752 pa. Assistant Lecturer TT$24,156–28,464 pa. (£1 sterling = TT$4.43). FSSU. Unfurnished accommodation or housing allowance. Family passages. Study and Travel Grant. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent as soon as possible to the Secretary, University of the West Indies, St Augustine, Trinidad. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF THE WEST INDIES – TRINIDAD

Applications are invited for the following posts in relation to a degree programme (in LAND SURVEYING to be introduced in the Faculty of Engineering:

1) PROFESSOR/SENIOR LECTURER in Land Surveying.
2) SENIOR LECTURER/LECTURER in Geodesy and Photogrammetry.
3) ASSISTANT LECTURER

Applicants should have wide academic and professional experience, appropriate for the senior appointments. Salary scales (to be reviewed): Professor TT$39,816–48,096 pa. Senior Lecturer TT$30,816–40,092 pa. Lecturer TT$20,784–28,752 pa. Assistant Lecturer TT$24,156–28,464 pa (£1 sterling = TT$4.41). FSSU. Unfurnished accommodation or housing allowance. Family passages. Study and Travel Grant. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent as soon as possible to the Secretary, University of the West Indies, St Augustine, Trinidad. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF DAR ES SALAAM – TANZANIA

Applications are invited for the post of ASSOCIATE PROFESSOR / SENIOR LECTURER/LECTURER IN GEOLOGY (MINING GEOLOGY). Applicants should have a higher degree and teaching and research experience. The appointee will be required to teach courses in Mineral Exploration or reserve estimation, geostatistics, property valuation and mine planning. Salary scales: Associate Professor Tz.Sh. 90,760 pa. Senior Lecturer Tz.Sh. 54,780–76,540 pa. Lecturer Tz.Sh. 44,400–62,340 pa. Appointees on expatriate terms will be entitled to an Expatriation Allowance of 50% of their basic salaries. (£1 sterling = Tz.Sh. 15.12). Family passages; F.S.B.U.; biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania, to arrive no later than 30 April, 1982. Applicants resident in the UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF DAR ES SALAAM – TANZANIA

Applications are invited for the post of SENIOR LECTURER/LECTURER IN MATHEMATICS (COMPUTER SCIENCE). Candidates must hold a higher degree and have teaching and research experience. The appointee will be expected to teach courses in Computer Science, supervise M.Sc. theses and develop software packages. Salary scales: Senior Lecturer Tz.Sh. 54,780–76,540 pa. Lecturer Tz.Sh. 44,400–62,340 pa. Appointees on expatriate terms will be entitled to an Expatriation Allowance of 50% of their basic salaries. (£1 sterling = Tz.Sh. 15.12). Family passages; F.S.B.U.; biennial overseas leave. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Chief Academic Officer, University of Dar es Salaam, PO Box 35091, Dar es Salaam, Tanzania, to arrive no later than 30 April, 1982. Applicants resident in the UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

OXFORD UNIVERSITY OF

DEPARTMENT FOR EXTERNAL STUDIES

STAFF TUTOR/TUTOR IN ECONOMICS and PHILOSOPHY

Applications are invited for the above posts, established posts in the Department for External Studies. Responsibility for the University's extramural teaching programme. Salaries will be on the University Lecturer scale (currently £5,010 to £13,737).

For the post in Biological Sciences applicants must have a good honours degree or post-graduate qualification in a biological subject. Applications are particularly welcome from candidates with a broad knowledge and experience in the Biological Sciences and whose research interests are in some relevant aspect of the subject including the social and ethical consequences of scientific developments.

For the post in Philosophy applicants must have a good honours degree or post-graduate qualification in Philosophy. Applications are particularly welcome from candidates with a broad knowledge and experience in the field of Philosophy and whose research interests are in some relevant aspect of the subject including the social and ethical consequences of scientific developments.

Staff tutors are required not only to teach in their subject areas, but in essence in the development, organisation and administration of courses in a part-time system. Evidence of experience in and promise in the above direction of adults would be advantageous.

Further details and application forms may be obtained from the Director for External Studies, Rewley House, Wellington Square, Oxford OX1 2JA.

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TRINIDAD

UNIVERSITY OF THE WEST INDIES

Applications are invited for the post of Lecturer in the Department of Civil Engineering. Candidates should have a degree in Civil Engineering with a specialism in Fluid Mechanics and Hydraulics. Professional experience is essential. Salary scales: Lecturer TT$29,784–43,752 pa. Assistant Lecturer TT$24,156–28,464 pa (£1 sterling = TT$4.41). FSSU. Unfurnished accommodation or housing allowance. Family passages. Study and travel grant. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent as soon as possible to the Secretary, University of the West Indies, St Augustine, Trinidad. Applicants resident in the UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

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UNIVERSITY COLLEGE OF BOTSWANA

Applications are invited for the post of DEPUTY BURSAR. Applicants should have a degree in commerce or accountancy and/or a professional qualification (e.g. ACA, ACCA, CIMA, CIPFA, ACIS, ACIB). Additionally, applicants should have several years experience of responsible work in the field of accountancy or auditing. Salary scale: P14,016 pa. (£1 sterling = P1.40). The University has a small number of vacancies within the British Government provided overseas supplementation. This post could be eligible for supplementation depending on the qualifications and experience of the successful candidate. Terms and conditions of service include: family passages; baggage allowance; 36% gratuity payable on satisfactory completion of contract; subsidised rent at rates currently £60 per month for unfurnished accommodation. Detailed applications (6 copies), naming 3 referees, should be sent to the Registrar, University College of Botswana, Private Bag 0022, Gaborone, Botswana, to arrive not later than 30 April, 1982. Applicants resident in the UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

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DUNDEE UNIVERSITY OF

DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS
LECTURER IN PHARMACOLOGY

Applications are invited for a Lectureship in Pharmacology in the Department of Pharmacology and Therapeutics, Ninewells Hospital and Medical School, University of Dundee. Candidates should be qualified in Pharmacology. Physiology or Pharmacy, possess a Ph.D. and have demonstrated ability for independent research in Pharmacology. The successful candidate will be expected to contribute to undergraduate teaching of Pharmacology to Science and Medical students and to develop a full research programme. There are excellent opportunities for collaborative research with other members.

The appointment, which is tenable from October 1 1982 will be on the non-clinical lecturer scale currently £6010 to £13,660).

Superannuation USS. A grant towards removal expenses to Dundee is available. Further particulars may be obtained from Mr. M. Cocker, Registrar, The University, Dundee DD1 4HN, with whom applications (6 copies), naming 3 referees and giving details of age, qualifications to date, should be lodged not later than 23 April 1982. Please quote ref. No. 7/82.

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JAMAICA

UNIVERSITY OF WEST INDIES

Applications are invited for the posts of LECTURER/SENIOR LECTURER/ASSOCIATE PROFESSOR IN CHEMISTRY in the Department of Chemistry. The appointees will be required to take major roles in the teaching programme in Physical Chemistry courses and to contribute to the research programme of the Department. Salary scales: Lecturer J$18,090 – 30,036 J$18,308 – 33,088 pa. (£1 sterling = J$4.37). Study and Travel Grant. Gratuities 24% of salary. Provision of housing allowance.

Detailed applications (2 copies), including curriculum vitae and naming 3 referees, should be sent as soon as possible to the Registrar, University of the West Indies, Mona, Kingston 7, Jamaica.

Applicants resident in UK should also send one copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF THE WEST INDIES – TRINIDAD

Applications are invited for the following posts in relation to a degree programme (in LAND SURVEYING to be introduced in the Faculty of Engineering:

1) PROFESSOR/SENIOR LECTURER in Land Surveying.
2) SENIOR LECTURER/LECTURER in Geodesy and Photogrammetry.
3) ASSISTANT LECTURER

Applicants should have wide academic and professional experience, appropriate for the senior appointments. Salary scales (to be reviewed): Professor TT$39,816–48,096 pa. Senior Lecturer TT$30,816–40,092 pa. Lecturer TT$20,784–28,752 pa. Assistant Lecturer TT$24,156–28,464 pa (£1 sterling = TT$4.41). FSSU. Unfurnished accommodation or housing allowance. Family passages. Study and Travel Grant. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent as soon as possible to the Secretary, University of the West Indies, St Augustine, Trinidad. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF KHARTOUM – SUDAN

Applications are invited for the following posts in the DEPARTMENT OF BUSINESS ADMINISTRATION:

1) 2 PROFESSORS/ASSOCIATE PROFESSORS/LECTURERS IN ACCOUNTANCY AND/OR FINANCIAL MANAGEMENT.
2) 2 PROFESSORS/ASSOCIATE PROFESSORS/LECTURERS IN OPERATIONS RESEARCH, QUANTITATIVE METHODS AND/OR PRODUCTION MANAGEMENT.
3) 2 PROFESSORS/ASSOCIATE PROFESSORS/LECTURERS IN MARKETING AND/OR MANAGEMENT.

Salary Scales: Professor £88,111 pa. Associate Professor £55,960–4,749 pa. Lecturer £33,171–5,377 pa. Family passages; baggage allowance; superannuation scheme; unfurnished accommodation; various allowances. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent to the Personnel Secretary, University of Khartoum, PO Box 321, Khartoum, Sudan, to arrive no later than 22 April, 1982. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

UNIVERSITY OF THE WEST INDIES – TRINIDAD

Applications are invited for the following posts in relation to a degree programme (in LAND SURVEYING to be introduced in the Faculty of Engineering:

1) PROFESSOR/SENIOR LECTURER in Land Surveying.
2) SENIOR LECTURER/LECTURER in Geodesy and Photogrammetry.
3) ASSISTANT LECTURER

Applicants should have wide academic and professional experience, appropriate for the senior appointments. Salary scales (to be reviewed): Professor TT$39,816–48,096 pa. Senior Lecturer TT$30,816–40,092 pa. Lecturer TT$20,784–28,752 pa. Assistant Lecturer TT$24,156–28,464 pa (£1 sterling = TT$4.41). FSSU. Unfurnished accommodation or housing allowance. Family passages. Study and Travel Grant. Detailed applications (2 copies), including a curriculum vitae and naming 3 referees, should be sent as soon as possible to the Secretary, University of the West Indies, St Augustine, Trinidad. Applicants resident in UK should also send 1 copy to the Committee for International Co-operation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

MILTON KEYNES
THE OPEN UNIVERSITY

FACULTY OF TECHNOLOGY
LECTURESHIP IN ENGINEERING MECHANICS

Applications are invited for the post of Lecturer to contribute, in the first instance, to the development of the engineering mechanics courses on Engineering Product Design. Candidates should have a good Honours Degree in Mechanical Engineering, or related field, and have appropriate industrial and design experience. The successful applicant will also be expected to contribute on Engineering Design components in other courses and to develop an active research programme.

Salary, according to age and experience, will be within the lecturer scale £6673 – £10560 per annum.

Application forms and further particulars are available from Mrs L. McGroarty (01-908 6151), The Open University, Walton Hall, Milton Keynes MK7 6AA, or telephone (0908) Milton Keynes (0908) 653058; there is a 24 hour answering service on Milton Keynes (0908) 653744.

Closing date for application: 7th April. H1

NEWCASTLE UPON TYNE
UNIVERSITY OF
THE LANGUAGE CENTRE

Applications are invited for a post of

LECTURER IN THE LANGUAGE CENTRE

Candidates should be specialists in English as a Foreign Language although preference will be given to an applicant who can also offer one of some of the range of modern languages. An interest in teaching languages by descriptive materials and techniques would be a special purpose would be an advantage as well as qualifications in linguistics.

Salary will be at an appropriate point on the Lecturer A scale: £5,670 per annum according to age and experience.

Further particulars may be obtained from the Secretary, The Language Centre, University of Newcastle upon Tyne, NE1 7RU, to whom applications (3 copies) together with the names and addresses of three persons to whom reference may be made should be lodged not later than 16th April 1982. Please quote ref. THES.

NEWCASTLE UPON TYNE
UNIVERSITY OF
SCHOOL OF ARCHITECTURE

The University invites applications for the post of DEPUTY DIRECTOR of the Joint Course in Architecture. The Joint Course leads to the Diploma in Architecture and is conducted by the School of Architecture, Planning and Landscape of the Polytechnic and the School of Architecture of the University. The successful applicant will be interested and experienced in the architecture of housing and will be expected to take up duty on 1st October 1982 or as soon as possible thereafter.

Salary will be at an appropriate point on a scale £8,670 to £10,860 according to age, qualifications and experience.

Further particulars may be obtained from the Registrar, The Polytechnic, Ellison Place, Newcastle upon Tyne NE1 8ST, to whom applications (6 copies) should be sent not later than 16th April 1982. Please quote reference 1/82.

Hs

Universities continued

LONDON
UNIVERSITY COLLEGE

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

LECTURERS

The department intends to make two appointments at the foot of the salary scale – £6,070 – £10,860 plus £1,035 London Allowance) to take effect in the Autumn Term of Session 1982/83. The department is keen to strengthen its teaching and research in the following areas: 1. Shakespeare and Renaissance literature, 2. Medieval literature, 3. History of the Language and *Present Day English Structure and Usage.*

Candidates with other interests may also wish to apply and their applications would be welcomed.

Further details can be obtained from Assistant Secretary (Personnel), University College London, Gower Street, London WC1E 6BT. Applications should reach him before 22nd April 1982. *H1*

SUDAN
UNIVERSITY OF KHARTOUM

Applications are invited for the following posts in the DEPARTMENT OF PREVENTIVE MEDICINE AND PUBLIC HEALTH, FACULTY OF VETERINARY SCIENCE:–

1. PROFESSOR to teach Viral Diseases.
2. PROFESSOR/ASSOCIATE PROFESSOR to teach Poultry Diseases.

Salary scales: Professor £88,111 pa. Associate Professor £55,171 – £33,377 pa. Family passages; baggage allowance; superannuation scheme; unfurnished accommodation; various allowances.

Detailed applications (6 copies), including a curriculum vitae and naming 3 referees, should be sent to the Personnel Secretary, University of Khartoum, PO Box 321, Khartoum, Sudan, to arrive not later than 23 April 1982.

Applicants resident in the United Kingdom should also send one copy to the Committee for International Cooperation in Higher Education, The British Council, 10 Spring Gardens, London SW1A 2BN. Further details are available from either address.

NEW ZEALAND
UNIVERSITY OF AUCKLAND

LECTURESHIP IN CLASSICS

Applicants must have a good honours degree in Classics and ability to teach in both Greek and Latin. It is hoped that the person appointed will be able to teach Plato to an advanced level. Salary (Lecturer) £13,335 – £16,641 per annum. The department is keen to strengthen its teaching and research in the following areas: 1. Shakespeare and Renaissance literature, 2. Medieval literature, 3. History of the Language and *Present Day English Structure and Usage.*

Candidates with other interests may also wish to apply and their applications would be welcomed.

Further details can be obtained from Assistant Secretary (Personnel), University College London, Gower Street, London WC1E 6BT. Applications should reach him before 22nd April 1982. *H1*

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Commencing salary will be established in accordance with qualifications and experience within the scale (for Lecturers, at present NZ$21,660 – $25,684 per annum. Conditions of Appointment and Method of Application are available from the Assistant Registrar (Academic Appointments), University of Auckland, Private Bag, Auckland, New Zealand or the Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF.

Applications, in accordance with the Method of Application, should be forwarded as soon as possible but not later than 23 April 1982. *H1*

Scholarships

LONDON
UNIVERSITY OF

EDMUND DAVIS SCHOLARSHIP IN MECHANICAL ENGINEERING

Applications are invited from suitably qualified graduates of any University for the Edmund Davis Scholarship tenable from October 1982. Under the terms of the benefaction, preference will be accorded to applicants born in the geographical areas formerly known as Northern and Southern Rhodesia.

The Scholarship is awarded for full-time post-graduate work at a School of the University for an approved course leading to a Higher Degree of the University.

The award is tenable for the duration of the approved course, not exceeding three years. The value is £2,500 each year and is not less than £2,170 per annum with fees. Travel and subsistence allowances may also be paid in the case of an overseas scholar.

Detailed information and application forms may be obtained from the Secretary to the Scholarships Committee, University of London Careers Service, 4 Gower Street, WC1E 7HU with whom completed forms and testimonials/references must be lodged not later than 10 May 1982. *H3*

Personal

FORD TRANSIT 15 seat custom bus, 1980, 31,000 miles, full weight, roof rack, excellent condition throughout, £5,395 + V.A.T. Save £3,000 on a new one. Will take old one part-exchange, guarantee given. Standing (01-883 0474 or 8311) EVENINGS and WEEKENDS. *H30*

IMMEDIATE ADVANCES £100 to £50,000. Written terms on request. Regional Trust Ltd., 11 Dover Street, Piccadilly, London W1A 4HQ. Phone 01-491 8344 and 4918. *L000*

PRIVATE BUSINESS Studies College for foreign students. Address SW1, seeks active partner with interest in business or sale of part-interest. Box No. 0780, The Times W.C.1. *B0*

Colleges and Institutes of Technology

SURREY COUNTY COUNCIL

NORTH EAST SURREY COLLEGE OF TECHNOLOGY
Reigate Road, Ewell, Surrey KT17 3DS

Applications are invited for the following post which is available from 1 September, 1982 or as soon as is possible:

Head of the Department of Community & General Education
(Grade IV Department)

The successful applicant will possess a good honours degree or a British University or an equivalent qualification and will have had substantial experience of teaching in further education.

Salary Scale:
In accordance with the latest Burnham Scale for teachers in establishments of Further Education.
Plus £213 p.a. London Fringe Allowance.
Generous relocation expenses in approved cases.
Stamped addressed envelope please for further particulars and application form from the Vice-Principal.

THE POLYTECHNIC OF WALES
POLITECHNIG CYMRU

DEPARTMENT OF CHEMICAL ENGINEERING
LECTURER II

Salary: £8,462 to £10,431 per annum inclusive
(Salary award pending)

A lecturer is required to teach on courses for the BSc and Tech. H.D. in Chemical Engineering from 1 September, 1982.

Application forms and further particulars may be obtained from:

The Personnel Officer
The Polytechnic of Wales
PONTYPRIDD
Mid Glamorgan CF37 1DL
Telephone:
(0443) 405133 ext 2021

CLOSING DATE: 23 April, 1982.

The Polytechnic of Wales

Polytechnics

Plessey Chair and Head of Department of Computing

£15,045–£16,590

Candidates with appropriate qualifications and industrial or professional experience are invited to apply for the first appointment to this Chair.

The successful applicant will play an important role in continuing existing activities but it is in the sphere of future development that the institution is seeking academic leadership of a high order.

The framework for development already exists in general terms and a number of new courses have been proposed. It is envisaged that the person appointed will be a recognised authority in the computing area and will be able to foster and encourage, by personal example, the growth of research and consultancy.

Further details and form of application available from the Staff Officer, Trent Polytechnic, Burton Street, Nottingham, NG1 4BU.

Completed applications to be returned by 5th April 1982.

TRENT POLYTECHNIC NOTTINGHAM

NORTH STAFFS POLY

Faculty of Engineering & Science

HEAD OF DEPARTMENT OF MECHANICAL ENGINEERING

GRADE 6

The above post which is located on the Stafford Site of the Polytechnic, will become vacant on 1st September, 1982.

Applicants should have high academic qualifications, preferably with research and/or industrial consultancy experience.

Salary: £15,045–£16,590.

Application forms and further particulars are available from the Personnel Officer, North Staffordshire Polytechnic, College Road, Stoke-on-Trent, ST4 2DE

Tel. Stoke-on-Trent (0782) 46531, Ext. 297.

Closing date: Monday, 5th April, 1982.

BRIGHTON POLYTECHNIC
Department of Computing and Cybernetics

PRINCIPAL LECTURER AND THREE LECTURERS II IN COMPUTING

Applicants must hold an honours degree and have experience directly relevant to the future lecturing requirements of honours degree courses in Computing and Microelectronics. The successful candidates will be expected to work in one of the following areas:

Microprocessor development, computer networks, databases, commercial programming.

One of the lecturer appointees will have a major responsibility for placement of sandwich students.

Salary: Principal Lecturer £11,298–£14,238
Lecturer II £8,482–£10,431

Further details and application forms may be obtained from the Deputy Head of Personnel, Brighton Polytechnic, Moulsecoomb, Brighton BN2 4AT. Telephone Brighton 693655, Ext. 2537. Closing date 9 April, 1982.

THE POLYTECHNIC OF WALES
POLITECHNIG CYMRU

DEPARTMENT OF CHEMICAL ENGINEERING

HEAD OF DEPARTMENT – GRADE VI

Salary: £15,045–£16,590 p.a.

(Pay award pending)

Applications are invited from Chartered Chemical Engineers with the academic and industrial experience to take on the leadership and management of a well-founded department with considerable scope for further development.

Candidates should be graduates with knowledge of course approval and validation, an interest in the applications of high technology and the energy and vision to promote all aspects of the work of the Department, including responses to the Finniston Report.

Further particulars and application forms are obtainable from:

The Polytechnic of Wales

The Personnel Officer
The Polytechnic of Wales
PONTYPRIDD
Mid Glamorgan
CF37 1DL
Telephone: (0443) 405133 ext 2021

CLOSING DATE: 23 April, 1982.

It is intended that the successful candidate will take up post on 1 September, 1982.

THE POLYTECHNIC OF WALES
POLITECHNIG CYMRU

DEPARTMENT OF CHEMICAL ENGINEERING
LECTURER II

Salary: £8,462 to £10,431 per annum inclusive
(Salary award pending)

A lecturer is required to teach on courses for the BSc and Tech. H.D. in Chemical Engineering from 1 September, 1982.

Application forms and further particulars may be obtained from:

The Personnel Officer
The Polytechnic of Wales
PONTYPRIDD
Mid Glamorgan CF37 1DL
Telephone:
(0443) 405133 ext 2021

CLOSING DATE: 23 April, 1982.

The Polytechnic of Wales

NORTH STAFFORDSHIRE
POLYTECHNIC

FACULTY OF HUMANITIES AND EDUCATION

DEPARTMENT OF MATHEMATICS

LECTURER I IN MATHEMATICS

Applicants should be prepared to lecture to degree in Mathematics or Statistics and to Diploma level provided throughout the Polytechnic. They should have a special interest in a mathematical subject supported by research and preferably a higher degree. Experience of using Mathematical, Statistical or Operational Research methods within an industrial or business organisation would be an asset.

Salary Scale: £5,034 – £8,658 per annum

Application forms and further particulars may be obtainable from the Personnel Officer, North Staffordshire Polytechnic, College Road, Stoke-on-Trent ST4 2DE. Telephone (0782) 45631 Ext. 297. Closing date: 9 April, 1982. *H3*

BRISTOL
POLYTECHNIC

DEPARTMENT OF ECONOMICS AND SOCIAL SCIENCE

LECTURER II/SENIOR LECTURER IN ECONOMICS
VISITING – Ref No. L31/

Applications are invited from qualified Health Visitor Tutors for the above post commencing on 1 September 1982.

SALARY SCALE: LII £5,436 – £9,924 (1st/2nd point) LSL £10,437 – £11,232 per annum. The appointment will be made on the appropriate scale according to qualifications and experience. (Progression on the LII scale is by annual increments to the LSL scale is in accordance with Burnham Further Education Report.)

For further details and an application form to be returned by 26 March 1982 please contact the Personnel Officer, Coldharbour Lane, Frenchay, Bristol BS16 1QY. Tel: 0272 656261, Ext 216 or 617.

Please quote reference number L31/744 in all communications. *HS*

BRISTOL
POLYTECHNIC

DEPARTMENT OF ECONOMICS AND SOCIAL SCIENCE

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Please quote reference number L31/744 in all communications. *HS*

TEESSIDE
POLYTECHNIC

DEPARTMENT OF COMPUTER SCIENCE

Applications are invited for three posts at

LECTURER II / SENIOR LECTURER IN COMPUTER SCIENCE

Computer Science is well established in the Polytechnic in terms of academic department that has the full support of exceptionally well equipped Computer Centre. The staff in the department teach the whole spectrum of computer science and its applications to engineering and physical science courses in computing and on courses in many disciplines throughout the Polytechnic. Research, development and consultancy work are recognised as important parts of the role in addition to teaching duties.

Applicants should be able to lecture in one or more of the main areas of the subject: programming and software engineering; computer systems organisation; computer languages and compilers and data processing.

Salary: £8,462 (efficiency bar) – £11,181 (workshop) – £11,781 per annum.

Salary scale: £5,034 – £8,658 per annum

Salary on appointment will be fixed by the Chair at £11,328 per annum.

Further particulars and application forms are available from the Personnel Section, Teesside Polytechnic, Borough Road, Middlesbrough, Cleveland TS1 3BA. Telephone (0642) 218121, Extension 4114. Closing date: 16th April, 1982. *HS*

THAMES
POLYTECHNIC

SCHOOL OF SOCIAL SCIENCES

LECTURER II IN ECONOMICS
(Temporary post)

Applications are invited for a temporary post (for the period September 1982 – April 1983) for applicants should be able to teach to all or some of the following specialised areas: economics, macroeconomics, international economics, theories of underdevelopment, China and Japan, and will be expected to contribute to non-specialist courses and to the research work of the School.

Salary scale: £7,821 – £11,181 inclusive.

Further particulars and application form from the Teaching Office, Thames Polytechnic, Wellington Street, London SE18 6PF, to be returned by 13 April 1982. *HS*

Polytechnics continued

SUNDERLAND
POLYTECHNIC
FACULTY OF ART AND DESIGN
DEPARTMENT OF APPLIED STUDIES

SENIOR LECTURER IN DESIGN STUDIES
(Temporary for one year commencing as soon as possible)

Salary scale: £9,624–£11,328 Bar £12,141 per annum

Applicants will be required to teach aspects of the history and theory of design and possibly to contribute to studio teaching in a specialist 3D Design or Craft subject area.

An application form and further particulars may be obtained from the Personnel Officer, Sunderland Polytechnic, Langham Tower, Ryhope Road, Sunderland SR2 7EE. Closing date 31st March, 1982. H3

Colleges of Higher Education

CANTERBURY
CHRIST CHURCH COLLEGE OF HIGHER EDUCATION
(re-advertisements)

Applications are invited for the following posts:

LECTURER / SENIOR LECTURER IN EDUCATION with special reference to **EDUCATIONAL BROADCASTING**. Candidates will be required to teach to honours degree level in both areas with the possibility of some contribution to the BA course in Radio, Film and Television Studies. Professional involvement in educational broadcasting is essential and practical production experience, particularly in Radio would be an advantage.

Salary: Lecturer II/Senior Lecturer £8,463–£12,141 p.a.

PART-TIME LECTURER IN FILM AND TELEVISION STUDIES

A Lecturer is required to teach Critical Studies in both Film and Television for joint BA degrees in Radio, Film and Television. He/She should be conversant with contemporary theories of criticism in both media and have some practical experience in film-making. The commitment will be the equivalent of sessional cover, mainly during the academic year.

Both appointments to take effect from beginning of academic year 1982.

For further details please write to Mrs. Jean Lowe, College Secretary, enclosing a stamped addressed envelope, to whom applications should be sent as soon as possible. H5

Colleges of Higher Education

LANCASTER
ST. MARTIN'S COLLEGE OF HIGHER EDUCATION

Applications are invited for the post of Lecturer Grade II in Design to teach on Higher Diploma and Degree Courses.

CATERING ADMINISTRATION
including Consumer Behaviour, Systems Theory, Catering Technology.

CATERING SYSTEMS
including Systems Planning, Systems Theory, Catering Technology.

FOOD AND BEVERAGE MANAGEMENT
including Food and Beverage Cost Control, Purchasing and Materials Management.

FOOD AND BEVERAGE STUDIES
including Kitchen Preparation and Production, Catering Theory, Gastronomy. Commencement date: September 1st, 1982. Closing date for applications: 16th April, 1982.

Further details from:
The Director, Dorset Institute of Higher Education, Wallisdown Road, Poole, Dorset, BH12 5BB
Tel: 0202 524111

Technical Colleges

REGIONAL TECHNICAL COLLEGE ATHLONE
CO WESTMEATH VOCATIONAL EDUCATION COMMITTEE

Applications are invited for the following permanent whole-time pensionable posts:

LECTURER 1:
Agricultural Mechanics
Preference may be given to candidates with experience in Farm Buildings.

Civil Engineering:
Preference may be given to candidates with experience in Farm Buildings.

COLLEGE TEACHER:
Trade Subjects (a) Motor Engineering
Preference may be given to candidates with experience in farm machinery and who have obtained the City & Guilds 030 qualification.

Trade Subjects (b) Motor Engineering
Preference may be given to candidates who have a wide experience of the motor industry.

English:
Preference may be given to candidates who can teach both oral and written communications to students at both technician and craft levels.

Qualifications and Conditions of Service in accordance with Memo V7 of the Department of Education. The number of increments which may be awarded for previous suitable experience in normally a maximum of five.

Salary Scales:

Lecturer	IR£10,892–£15,053
College Teacher	IR£9,245–£13,992

Application forms and particulars of the posts are available from the Principal, Regional Technical College, Athlone, Co. Westmeath, Ireland, with whom applications should be lodged *not later than 5.00 p.m. on 5th April, 1982.*

Office of Committee
Bridge House
Bellevue Road
Multinger

S. O'Lochlainn G.E.D.

Colleges of Further Education

ilea Inner London Education Authority

Principal

Hammersmith and West London College
Re-advertisement

Applications are invited for the post of Principal of Hammersmith and West London College which falls vacant on 31 August 1982 on the retirement of Dr W. Bonney Rust.

The appointment will date from 1 September 1982 or as soon after as possible.

The main premises, opened in September 1980, are at Gliddon Road, Barons Court, W14, with a large branch about 1½ miles away at Lime Grove, W12.

The college structure at present consists of 10 departments; 8 of which are at the Barons Court main building. These are: English Studies, General Education (2 departments) International Education, Executive Secretarial Studies, Business Studies, Professional Studies and Advanced Business Studies. The remaining departments of Crafts, and of Construction and Estate Management are at Lime Grove.

Applicants should be well qualified academically and possess a sound knowledge of further and higher education together with teaching and administrative experience at a senior level. Relevant experience in industry or commerce would be welcomed.

Under the provisions of the Burnham (Further Education) Report the college is in Group 9 and the salary for the Principal is £22,236 plus £759 London Allowance.

Further information and application forms (to be returned by 7 April 1982) may be obtained from the Education Officer (EO/FHE4), Inner London Education Authority, Room 257A, The County Hall, London, SE1 7PB.

Previous applicants will be re-considered automatically.

BOURNEMOUTH AND POOLE COLLEGE OF FURTHER EDUCATION
DEPARTMENT OF BUSINESS STUDIES – BOURNEMOUTH

SENIOR LECTURER IN OFFICE TECHNOLOGY

Required from 1 September, 1982, to lead a team of experienced staff in the continuing development of this field, to teach on relevant programmes and to accept particular responsibility for advising on equipment and curriculum.

Candidates should be of degree status and possess a sound knowledge of modern office technology and its applications.

Salary: Senior Lecturer: £9,624–£11,328 (Bar)–£12,141 p.a.

Further details and application forms available from the Principal's Secretary, Northcote Road, Portsmouth, Poole. Tel: 0202 747600. Forms to be returned within two weeks of the date of this advertisement.

KENT
COUNTY COUNCIL
EDUCATION COMMITTEE
NONINGTON COLLEGE

LECTURER 2 – MOVEMENT STUDIES

Applications are invited for a Lecturer to make a major contribution in the practical and related theory areas of gymnastics, netball and tennis in the B.A. (Honours) degree programmes from September, 1982 (or earlier if possible). Qualifications in other practical and theoretical areas will also be welcomed.

Further details may be obtained from the Principal, Nonington College, Canterbury, Kent CT15 4HP. Closing date for applications, 2nd April, 1982. H7

Awards

UNIVERSITY OF READING SCHOOL OF EDUCATION

SSRC Studentships

Three awards are available from October 1982 for the degree of M.Phil./Ph.D. Research (3/5 years). One of the research awards is directly linked with work on employers' use of examination results and selection tests. The other two awards could be in any field of educational research.

Applications for studentships should have, or expect to have, an upper second or first class honours degree or a postgraduate qualification in education or social science from a U.K. university or the CNAA.

Further details are available from Professor J. Wrigley, University of Reading School of Education, London Road, Reading RG1 5AQ, to whom applications giving the names of two referees should be sent by 30th April, 1982.

LONDON
INNER LONDON EDUCATION AUTHORITY
SOUTH WEST LONDON COLLEGE

MANAGEMENT STUDIES DEPARTMENT

Required as soon as possible, a Lecturer I in Administration and General Management.

Applicants should have a relevant professional qualification or an appropriate degree with managerial and some teaching experience.

Salary scale: Lecturer I. On an incremental scale within the range of £5,094–£6,858 (plus £759 Inner London Allowance) starting point depending on qualifications, training and experience. Salary scale subject to formal approval.

Assistance may be given towards household removal expenses. Further information and range of application returnable within 14 days from the Deputy Administrative Officer, South West London College, Ram Gateway SW17 0TG. Tel: 8543. H7

Administration

DURHAM
UNIVERSITY OF
ADMINISTRATIVE ASSISTANT IN THE REGISTRY'S OFFICE

Applications are invited from candidates who will be graduates in 1982 for the post of Administrative Assistant in the Registry's Office from 1 June 1982, or such later date as may be arranged. Initial salary will be on the Administrative Assistant Grade 2 scale £7,299–£8,211 per annum, according to age. Thereafter the Administrative Assistant is in the line of promotion to the post of Registrary's Officer responsible to the Registrary.

Further particulars may be obtained from the Registrary, University Office, Durham, DH1 3HP, to whom applications should be sent by 31st March, 1982. Applicants should arrange for three referees to send their reports by 6 April, 1982.

LONDON

GENERAL SECRETARY of THE PHYSICAL EDUCATION ASSOCIATION OF GREAT BRITAIN and NORTHERN IRELAND.

The Executive Committee invite applications for the post of General Secretary of the Association. The person appointed will be the senior administrative officer of the PEA and will be responsible to the executive Committee for the conduct of the Association's affairs. Applicants should have substantial experience in Physical Education and administration.

The Executive Committee are willing to consider a full or part-time appointment, for three to five years initially, at a negotiated salary commensurate with qualifications and experience.

Applications should be made not later than 15th May 1982, to: The Appointments (Ref. G/81), The Physical Education Association, Ling House, 10, Nottingham Place, London W1M 4AX. H11

REMINDER

COPY FOR CLASSIFIED ADVERTISEMENTS IN THE T.H.E.S. SHOULD ARRIVE NOT LATER THAN 10.00 AM MONDAY PRECEDING THE PUBLICATION

Librarians

Chelmer Institute of Higher Education

DEPUTY SITE LIBRARIAN AP3/4
£5,652–£7,137 per annum

A Chartered Librarian is required on the Chelmsford Site of the Institute. Duties include supervision of service areas in main library, control of reservations and inter-library loan service, general readers adviser duties. The site serves students chiefly following degree and final professional examinations in such areas as Law, Planning, Business Studies, Catering, Engineering, Social Services and Construction Management. Experience in an academic library servicing any of these topics will be an advantage.

Application forms and further details available from the Acting Secretary to the Institute, Chelmer Institute of Higher Education, Victoria Road South, Chelmsford CM1 1LL. Closing date 31st March, 1982. Telephone Chelmsford 354491, Ext. 221.

ESSEX County Council

Examiners

UNIVERSITY OF LONDON
UNIVERSITY ENTRANCE AND SCHOOL EXAMINATIONS COUNCIL
GENERAL CERTIFICATE OF EDUCATION

The Council invites applications for the following

Chief Examiner appointments:

ADVANCED LEVEL
General Studies from June 1983

ORDINARY LEVEL
Government and Political Studies from June 1983
Mathematics Syllabus A from June 1984

Applicants should be graduates or hold appropriate qualifications and should be under the age of 65 with five years recent teaching experience. Experience in GCE or CSE examining would be an advantage.

For application forms and further details write to: The Secretary, University Entrance and School Examinations Council, University of London, 66–72 Gower Street, London WC1E 6EE. Applicants should enclose a self-addressed foolscap envelope. Completed application forms should be returned by the 27 April, 1982.

Previous applicants for either of the above posts need not reapply since their applications will be considered with any new ones received.

Colleges and Departments of Art

WINCHESTER SCHOOL OF ART

PRINCIPAL LECTURER IN CHARGE OF PAINTING

Applications are invited from established painters to lead this section of the Department of Fine Art.

The Department was re-approved without condition or time limit for the award of BA Degrees in 1981. Main studies in Painting and Sculpture are currently validated, with a new main study in Printmaking under consideration.

It is hoped that the person appointed will take up duties as soon as possible. Salary scale is £11,298–£14,238 per annum.

Further information and application forms are available from The Registrar, Winchester School of Art, Park Avenue, Winchester SO23 8DL. Closing date for receipt of completed application forms, Friday 2nd April, 1982.

WINCHESTER SCHOOL OF ART

Two Visiting Fellowships in the Department of Fine Art: Painting & Sculpture. Associate Lectureship in the Department of Textiles – Weave/Knit.

The School invites applications for these three half-time posts. Those in Fine Art are for one year in the first instance; that in Textiles is permanent. The work in all cases will be with Degree students and the Visiting Fellowship in Etching will assist in the validation of a new main study in Printmaking within the well-established Fine Art Course.

Salary scale £3,321–£5,215 with possible eventual extension up to £6,075.

Information and application forms are available from The Registrar, Winchester School of Art, Park Avenue, Winchester SO23 8DL.

Closing date for applications 9th April, 1982.

Colleges and Departments of Art continued

SURREY COUNTY COUNCIL
EPSOM SCHOOL OF ART & DESIGN
require

Senior Lecturer
in the
Department of Foundation Studies

The Department offers a DATEC Diploma in General Art and Design and Ordinary Surrey Diploma for Pre B.A. Foundation students. The post carries the responsibilities of Deputy Head of the Department. Applications are invited from those with experience of art and design education generally and the 16/19 age group in particular.

Salary: £9,624–£12,141 (bar at £11,328) plus £213 Surrey Allowance.

Application form and further particulars from the Chief Administrative Officer, Epsom School of Art and Design, Ashley Road, Epsom, Surrey KT18 5BE. Tel: Epsom 28811.

DARTINGTON COLLEGE OF ARTS

PRINCIPAL
(Burnham Grade V – £17,703–£18,612 under review)

The Governors are seeking to appoint a successor to Peter Cox who is retiring at the end of the 1982/83 academic year. Applications are now invited.

Details may be obtained from the Senior Administrative Officer, Dartington College of Arts, Totnes, Devon, TQ9 6EJ.

Research

UNIVERSITY OF EAST ANGLIA
Norwich

Research in Oceanography

Applications are invited for the position of Postdoctoral Senior Research Associate to work on mathematical modelling of the shelf break circulation. Applicants should have experience in some field of dynamic oceanography. Salary within the range £8,070–£10,576 pa. Appointment for maximum of two years.

Apply as soon as possible to Dr J.A. Johnson, School of Mathematics and Physics, University of East Anglia, Norwich NR4 7TJ.

DURHAM
UNIVERSITY OF
SCHOOL OF EDUCATION

Applications are invited for the post of **RESEARCH ASSISTANT** to join a team of participant observers studying groups of older pupils and their education. The post is funded jointly by the S.S.R.C. and the University of Durham and is part of the S.S.R.C.'s research initiative into "Young People in Society". The post is tenable for a period of two years from 1 September 1982. Applicants should be graduates in the social sciences, preferably psychology, and experienced in working with young people in informal settings will be an advantage. Starting salary will be within the range £5,885 to £6,870 on the Research Assistant I(B) scale.

Further particulars may be obtained from the Registrar and Secretary, University of Durham, Old Shire Hall, Old Elvet, Durham, DH1 3HP, to whom applications (3 copies) together with names of three referees, should be returned by Wednesday, 14th April, 1982. H10

BRADFORD
UNIVERSITY OF

POST RESEARCH FELLOWSHIP
in Electrical Engineering
(Appointment for up to 3 years)

Applications are invited from candidates holding a good honours degree in Electrical Engineering or Mathematics and with good knowledge of solid state physics to work on a research project on [illegible] high-speed devices for [illegible] applications. The appointment will be on the Research Assistant Grade 1A scale with salary within the range £6070–£6980 pa.

Application form and details of the research project may be obtained from the Personnel Officer, The University, Bradford BD7 1DP. Closing date [illegible] H10

BRADFORD
UNIVERSITY OF

POSTGRADUATE RESEARCH STUDENTSHIPS IN BIOMEDICAL CHEMISTRY

Applications are invited for [illegible] research studentships [illegible] Trust for Research in Orthopaedic Surgery. Applicants should have an initial degree in Biochemistry, Chemistry or Biomedical Engineering and some experience [illegible] Technician. Ref. No. 2/82. Salary [illegible] Initial appointment for [illegible] Superannuation [illegible] Applications [illegible] Personnel Officer, The University, Bradford BD7 1DP, quoting Ref. No. [illegible] Bradford [illegible] H10

SHEFFIELD
THE UNIVERSITY OF
DEPARTMENT OF [illegible]

Applications are invited from men and women for the post of Research Assistant to work on a research project on [illegible] Travel Behaviour in South Yorkshire. The post is funded by the Transport and Road Research Laboratory and supervised by Dr. A. Hall and Mr. W. Young. It is tenable as soon as possible for two years on appointment to Grade 1A initially up to £6070 a year. Particulars from Dr. A. M. Hay, Department of Geography, The University, Sheffield S10 2TN, to whom applications, including the names of 3 referees, should be sent by 9 April 1982. Quote Ref. R677/01. H10

SHEFFIELD

JAPAN FOUNDATION ENDOWMENT COMMITTEE

GRANTS FOR TEACHING AND RESEARCH

The annual income from a donation made by the Japan Foundation is available for disbursement by the committee established under the auspices of the UGC for the promotion of Japanese Studies in University Institutions in the U.K. and administered from the University of Sheffield. Further particulars and application forms are obtainable from the Academic Secretary, the University, Sheffield S10 2TN, to whom applications should be sent by 1 May 1982. Quote ref: R676/D. H10

ULSTER
THE NEW UNIVERSITY
SCHOOL OF HUMANITIES

RESEARCH ASSISTANT IN HISTORY

Applications are invited for a research assistant to help with research into the history of migration from Ulster to North America. The post is funded by the Carnegie Weston Trust and the person appointed will be expected to assist in the organization and development of Ulster-American studies. The appointment is for one year from 1st October 1982 and the salary is within the scale £6,070–£6,475–£6,880 per annum.

Further particulars may be obtained from The Registrar, The New University of Ulster, Coleraine, Northern Ireland BT52 1SA (quoting Ref: 82/31) to whom applications, including the names and addresses of three referees, should be sent not later than 30th April, 1982. H10

Courses

THE POLYTECHNIC, HUDDERSFIELD

DIPLOMA IN FURTHER EDUCATION
(a Leeds University award)

The course gives experienced teachers from Colleges, Polytechnics and Community Centres the opportunity to study practical issues of management, assessment and curriculum planning and to pursue in depth a topic of relevance to their department or college.

FULL-TIME COURSE

The full-time course is located at Huddersfield Polytechnic. It is of one academic year's duration beginning September 1982.

PART-TIME COURSE

This course extends over two consecutive years and involves attendance on one day a week (or half-day and evening) together with a block period of four weeks at the end of the first year. The part-time course is offered at Huddersfield Polytechnic and its Extra-Mural Centres at Bedford, Ipswich, and Norwich and begins during the first week of October 1982.

The Diploma course is intended to provide advanced study for persons with teaching experience in Further/Higher Education or related fields in order to enable them to undertake posts of greater responsibility e.g. as heads of departments, professional tutors, section leaders.

Application forms and further particulars may be obtained from:

The Assistant Registrar, The Polytechnic, Faculty of Education, Holly Bank Road, Lindley, Huddersfield HD3 3BP
Tel: 0484 25611

Overseas

UNIVERSITY OF NATAL
Department of Sociology
Durban, South Africa

Applications are invited from suitably qualified persons, regardless of sex, religion, race, colour or national origin for appointment to the posts of:

1) LECTURER
(Industrial Sociology including Industrial Relations)

2) LECTURER
(Mainly Sociological Theory)

The post in Industrial Sociology is available immediately, and the other from 1st January, 1983. Candidates should be in possession of at least an Honours degree in sociology or its equivalent. A Master's degree or a doctorate will be an advantage.

Both lectureships will involve some teaching in areas of sociology apart from those indicated, depending on the areas of expertise and interest of the appointees. Ability to teach both some general sociological theory and industrial sociology could be useful but is by no means essential. Candidates should indicate clearly the extent and nature of their teaching and research experience in industrial sociology and/or theory, as the case may be, as well as in other fields of sociology.

Salary in the range: R10 665 – R19 230 per annum.

The commencing salary which will be dependent on the qualifications and/or experience of the successful applicant. In addition, a service bonus of 93% of one month's salary is payable subject to Treasury regulations.

Application forms, further particulars of the post and information on pension, medical aid, group insurance, staff bursary, housing loan and subsidy schemes, long leave conditions and travelling expenses on first appointment are obtainable from The Secretary, South African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE or the Registrar, University of Natal, King George V Avenue, Durban 4001, South Africa, with whom applications, on the prescribed form, must be lodged not later than 30th April, 1982 quoting the reference No. D21/82.

THE BRITISH COUNCIL

OMAN

Head of Department of Medical Laboratory Technology, Institute of Health Sciences, Muscat.

Reference: 82 A 21

The new Institute of Health Sciences, Muscat, opening September 1982 will have a total student capacity of 250 which will include the existing School of Nursing with 132 students. All students are Omani and the age range is 15–30 for all courses. Most of the students are Arabic and/or Swahili speaking.

Duties: To be responsible to the Principal for the management and supervision of the Medical Laboratory Department. This will include planning curricula, preparing materials, staff development, monitoring and evaluating course implementation, coordination of placement of students and outreach programmes with Hospitals, and some class teaching.

Qualifications: Candidates must hold Fellowship of the Institute of Medical Laboratory Sciences or equivalent. They must have held a senior post in a Medical Laboratory with proven management skills and have appropriate teaching experience. Overseas experience would be an advantage. Basic knowledge of Arabic would be useful. Candidates should be British and preferably aged 35–50 years. Driving licence essential.

Salary and Benefits: RO 11,772 per annum (£18,835.20 @ £1 = 0.625). Plus car allowance RO 75 per month and utilities allowance RO 44 per month. One month's salary for each completed year paid after 2 years service. Free furnished accommodation; free medical treatment; 48 days annual leave plus public holidays. Return air fares paid annually for postholder and family of up to 3 children. 2 year contract, renewable.

Closing date for applications: 16 April, 1982.

For further details and an application form, please write, quoting the post reference number to: Overseas Educational Appointments Department, 90–91 Tottenham Court Road, London W1P 0DT.

THE BRITISH COUNCIL

UNIVERSITY OF CAPE TOWN CHAIR IN MATHEMATICS

A new chair has been established in the Department of Mathematics for which applications are invited for appointment on or as soon as possible after 1 July, 1982.

Preference will be given to candidates of demonstrated academic excellence in some branch of mathematics. The successful applicant will be expected to teach undergraduate and graduate students and to undertake and lead research.

Appointment depending upon qualifications and experience will be made on the salary scale R23 109 – R24 045 x 1035 – R30 255 per annum (effective 1st April). A service bonus of nearly one month's salary is payable annually.

Applicants should submit a full curriculum vitae, stating present position and salary, research interests and publications, the date duly could be assumed and the names and addresses of three referees.

Further information should be obtained either from Miss J. Lloyd, S.A. University Officer, Chichester House, 278 High Holborn, London WC1V 7HE or the Registrar, (attention: Appointments Office), University of Cape Town, Rondebosch, 7700, South Africa, by whom applications (quoting ref. no.) must be received by 7 May, 1982.

The University's policy is not to discriminate in the appointment of staff on the grounds of sex, race or religion. Further information on the implementation of this policy is obtainable on request.

Courses continued

SURREY
THE UNIVERSITY
DEPARTMENT OF PHILOSOPHY

Postgraduate Diploma, M.A. in Philosophy

The Department offers both of the above on a one year, full-time basis only. The Diploma and M.A. are taken with specialization in one of PHILOSOPHY, RELIGIOUS STUDIES, PHILOSOPHY OF SCIENCE.

Further details available from the Departmental Secretary, Department of Philosophy, University of Surrey, Guildford GU2 5XH. Tel: Guildford 71281, ext. 495. H41

LONDON
CHELSEA COLLEGE
UNIVERSITY OF LONDON
STUDY HISTORY AND PHILOSOPHY OF SCIENCE AT CHELSEA

One year MSc courses begin October 1982. Facilities for MPhil and PhD by research. Applicants must possess a first degree in one or more of: history, philosophy or mathematics. All courses approved for DES grant awards. Early application is advised since the closing date for giving a 1982 award is May.

Send for details to Professor J. Agassi, Department of History and Philosophy of Science, Chelsea College, University of London, Manresa Road, London, SW3 6LX. Tel. 01-351 2488. H41

REMINDER

COPY FOR CLASSIFIED ADVERTISEMENTS IN THE T.H.E.S. SHOULD ARRIVE NOT LATER THAN 10.00 AM MONDAY PRECEDING THE PUBLICATION

Don's diary

Monday

Much of the morning is spent in a meeting with the college administration discussing the times at which our terminal room should be open. As the computer is running at all times, including weekends, the view of the user community is that the public terminal room should be available at all times. For the administration, however, there are security and safety problems. We share a building with other departments but in the late evenings and over the weekend there is no one present. The problem could be satisfactorily resolved if we could set up a small room elsewhere with a few terminals, near the porters' lodge, thereby solving the security problems and providing enough terminals for the admittedly small number of users at unsocial hours. Such a room exists but is in use by another department ... we'll see if we can negotiate.

The afternoon is spent with university administration, on plans for extensions of our computer system. We put the finishing touches to the operational requirement, ie we agree how I am to rewrite the earlier draft, so that it can be sent to the computer board, the central computer and telecommunications agency and, finally, suppliers.

My lecture to a beginners' class in computing is light relief to end the day.

Tuesday

Early morning with my first year computer science tutorial group. Only three of the four come, they think the other is "helping with the protest" (about grants). I like this group, they are keen and work hard. Then, as a complete change, the management option lecture for our MSc students, quite tricky stuff on what a manager has to know about modelling.

The board of studies meeting has been cancelled so I can accompany two of our MSc students on a visit to the phonetics department. We want to cooperate with them on the production of microprocessor controlled equipment to aid in the speech training of deaf people and these two want to do projects relating to this work. It looks as if they'll have an interesting and useful summer.

Wednesday

Collegiate council committee for non-teaching staffs occupies the morning. I am there to look after the interests of computing staff and am the only person there who is not a full time administrator. A dull agenda (well, it normally is), some of the discussion is about the forthcoming introduction of "self-certification" for short periods of sickness, rather more about early retirement schemes for non-academic staff.

The lunch-time entertainment is a meeting of the AUT committee. The college's request for separate UGC funding and the attitude of the rest of the university, indeed of AUT nationally, is good for 15 minutes, then the university's subject area review committees, early retirement and tenure. Perhaps because programmes, like other "academic related" staff, do not have tenure I view matters somewhat differently from a pure academic. Of course tenure is nice to have but it does also mean that universities have a reaction time of some 30 years or so to changing circumstances. That's too slow. It must be possible to separate "tenure" from "academic freedom", but how does one go about it?

Thursday

Our (weekly) departmental "management group" meeting takes place today, having been postponed from yesterday because several people had other commitments. As it's the first one of the month it's the "Expanded MG", where all our team leaders are involved as well. All the team leaders have to prepare formal reports on recent progress, problems etc. This is a useful exercise in keeping everyone informed as well as giving the necessary background for future policy. At the beginning of the week we introduced changes in the way our computer printers work, in the *hope of making significant savings on paper*. This has gone quite well, with few complaints. Not so good is the news that we still have problems with British Telecom in getting some of our communication lines working properly. On this occasion I miss part of the meeting, for a tutorial with some second year students.

My beginners' class again this evening, the mysteries of Reverse Polish Notation. It's interesting to realize that what I can now do as an example for a class at this level was the latest thing in research only 20 years ago.

Friday

The day starts with a message that one of our users has complained that his terminal has been out of action since Monday and why has nothing been done? I ask one of my colleagues to let me have the facts within an hour, to be ready when I come back from my MSc class. Our staff had in fact tried to find the fault on Monday and Tuesday, unsuccessfully, but had traced everything by Thursday and all is now OK again.

Today the directors of the main computer centres in the university are to have their regular executive meeting. We always combine this with lunch, at one or other of the colleges, and have a good informal discussion. We know each other very well and as there are no others present we do not have to score debating points! Developments in networking and control of access are today's topics. As the meeting is at Queen Mary College I take the opportunity to visit the chairman of the board of studies who is gathering information about the university's proposals for computer science and the implications of expenditure cuts. We agree that the likely outcome of the UGC's desire for a *slight increase* in mathematical subjects will be a significant *decrease* in computer science, because the "base year" was at a time when numbers were going up rapidly. Seems crazy when the country wants people with these skills.

The last job of the day is a chat with another of our MSc students about the choice of project, probably on data bases and class records. Pick up the papers that have come for next week's meetings for weekend reading, then home.

Saturday

La Ronde at the RSC. A very slight play really, no comparison with the splendid film of many years ago. Why does a Viennese play get a French title when it is translated into English? How about "Roundelay" to give the idea of succession as well as telling us what goes on? Nice though, to see John Nettles as The Count, we used to see him act when he was an undergraduate. Hasn't he done well?

Sunday

Write diary of a pretty average week and prepare for the next one.

Paul A. Samet

The author is professor of computer science and director of the computer centre at University College, London.

Learning from the Greeks

George Rainsford

Much of the concern of the authors of these columns recently has been with the serious management issues posed for higher education, both in Great Britain and the United States by the massive cuts in public appropriations. The required down-sizing of our institutions could all too easily and unfortunately occupy our full attention and lead us to a neglect of intellectual and ideological issues. It is with some relief that I turn now in this column from concerns about numbers and dollars to concerns about ideas.

One of the great educational assertions is that there are important understandings to be gained from the prodigious lessons of civilization's accomplishments. We are not the first generation of men and women to wrestle with the great and personal questions of truth and falsehood, justice and oppression, love and hate. Thank God, we will not be the last.

I have been constantly reminded of how frequently and successfully we have been informed, even in all our preoccupations with our modernity, by the ancient Greeks. In preparing for this column I read again in Homer's *Odyssey* and *Iliad*, in Plato's *Republic*, and in Jaeger's *Paideia*. The Greeks gave us the first notion of a society formed by the pursuit of an ideal – the ideal of the trained citizen who would not shrink from leadership, who could if called upon make independent judgments, who put right action before expediency and common cause before personal ambition.

The contribution of the Greeks was not only in their sense of the ideal of individual achievement but more importantly the ideal of collective aspiration and accomplishment. It was the reconciliation of individual strength with collective need.

For the Greeks the central problem of education was not the pursuit of knowledge but rather the pursuit of significance. Learning was not a passive cognitive acquisition of data, but also involved emotional commitment, intellectual integration, value formation and expression, and practical action. It was also experiential.

In a sense one could say that the Greeks had three ideas of education: the Ionic, the Spartan, and the Platonic. The first believed that the individual ought to be nourished and humoured regardless of the interests of the community. According to the second, the individual may and should be neglected for the benefit of the state. The third view, the one which we cherish, believed that any nation is a slovenly guardian of its interests if it does not do all it can to make the individual citizen discover his own powers. It further believes that the individual becomes a cripple from his or her own point of view if he is not qualified by education to serve the community.

Thus we can talk about education as an adventure in the Homeric sense – an Odyssey into the great unknown, a testing of strength, an individual epic. Yet in an important way education is not a journey which is undertaken alone. There are other travellers along the way. It is not a tough wilderness adventure where the issue is a contest with the elements. In an increasingly important sense the issue is found in the relationship which we have with others.

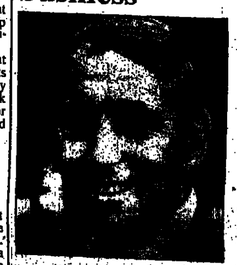
One of the things therefore which we must learn from the Greeks if we are to flourish is the necessary relationship between individual achievement and the common aspiration and accomplishment. We must understand the need for the pairing of the rights of individuals and the rights of communities, be those the family, the college or university, the city or the nation.

In a recent *Newsweek* there was a description of a new growth industry – survival. The article described a personal "survival letter" which recommended a beginner's arsenal of an assault rifle, a .45 calibre hunting rifle, a heavy calibre revolver, and a basic assortment of 22s. In addition there are books mentioned on how to survive the next depression, strategies for corporate survival, techniques for survival in cooking and even books on how to survive marriage. Explicit in most, if not all of these, is the message that in a financial situation exists which makes it impossible to think any longer of such ethics of responsibility or of concern for others. The message is that it is a dog-eat-dog world and everyone is on his or her own. Survival – personal and individual survival or institutional survival – is what is called for. Anything that promotes that survival is ethical or, if not ethical, is to be expected. Ethics is a luxury that only secure and comfortable societies and people can afford.

The Greeks in the classical tradition which they represent and which is so much a part of the heritage of both British and American education have important things to say to us institutionally as well as individually about these matters. They remind us that individual accomplishment is important but not at the expense of the larger society for both the individual person or institution, and the larger society have rights which must be understood jointly.

The Greeks also remind us of the need for an ideal. As individuals and as institutions we have all too frequently codified and formalized our aspirations instead of living them, renewing and fighting for them. Institutions under pressure find ways to push their most fundamental commitments into the background so that they can deal more expeditiously with the problems at hand – the business, the politics, and the reality of institutional survival. But we must never forget that both British and American higher education are made up not only of money, people, buildings, and programmes, but also of ideals and indeed some radical ideas about education and human development. The urgent need then is for a shared vision, a clear sense of values, a fresh sense of what is worth surviving for. Only then will we be able to restore the vitality of the academic community and relate it to the needs of the nation. Only then can we move on beyond the issues of the management of our educational enterprises, budgets, steady-state economics, and the difficulty of personnel decisions. Only then can we say with Jefferson, whose study of the classics coloured his entire life that "we like the dreams of the future as well as the history of the past."

All rather a dirty business



Christopher Price

An open, annual dialogue betwen the UGC and the government should clarify British university policy. The UGC will have to clarify its mind about the system's *objectives* as well as its needs, and the government's financial decisions will be able to be tested against very much clearer criteria than has been possible in the past. All this will only happen, of course, if Dr Parkes and his colleagues stand up and are counted; if they display all that sturdy independence implicit in the "arms-length" principle and their new right to publish; and if Norman Hardyman, their new secretary, responds to the DES downgrading his job from deputy to under-secretary, by abandoning too much hope of passage to the higher ranks of the department and making it clear that his first and only loyalty now is to the committee he services, the universities to which it distributes money and in general to the academic rather than the bureaucratic tradition. There is little doubt that John Beavan, his NAB opposite number, will take an independent attitude, schooled as he has been in the nonconformist bureaucracies of Natfhe and ILEA. Only time will show whether our Norman can rise to the occasion from the Oxbridge, high-flying first division, elite conformist tradition of the official-secrets-pct-protected home civil service. I first learnt to admire his talents 15 years ago when he took over as Tony Crosland's private secretary at the DES. I'm sure he'll do his best.

I suspect the polytechnics have just won round one on overseas student fees. The latest DES press release pretends that Keith Joseph recommends fees to universities, with the local authorities performing that task for colleges and polytechnics. In reality the DES now fixes the lot, and consultation is a brief polite fiction, as was made clear last year when the home students fee was halved, against the select committee's advice, after three weeks' non-consultation. The new scales make clear that polytechnics can now undercut universities for laboratory-based science courses for new overseas students by £600 a year. (Universities must charge £3,600, polys can charge as little as £3,000.) On the other hand, universities can undercut polys on arts courses by £300 a year. (Polys must charge £3,000, universities, £2,700.) There's no logic in it – it's just one more piece of chaos consequent on the ill-thought out decision to put a full-cost fees three years ago. If Norman Hardyman and John Beavan have any sense, they'll now try to do a deal and bring some coherence back into the overseas student fee market place.

For a market place it now is. For the more entrepreneurial universities and polytechnics, the overseas student problem has moved, in a mere 18 months, from spelling bankruptcy to salvation. While LSE fills up with dubious offspring of east coast American businessmen who can't get them into Harvard or Yale, the hotels of Hong Kong, Bangkok and Kuala Lumpur are replete with university professors and registrars touting for students to save their institutions from bankruptcy. In most academics, it is an unedifying and distasteful scene, which they prefer not to notice or think about until with a nod and a wink from the registry they are asked to be less fussy about the exact A level grade of some of the new applicants. A few weeks ago I was at one of those non-attributable, non-existent gatherings at Oxford, where the great and the good can make noises to each other about the current climate in higher education. The vice-chancellorian consensus was that it was all a rather dirty business, but going pure philosopher kings and themselves into an arena where they'd no business to be dragged. But on closer examination, I concluded that some of the louder complainants, were among the greatest beneficiaries of the market: I suspect that it is a market that we have come to terms with.

LETTERS TO THE EDITOR

Polytechnics and local government accountability

Sir, – Having been associated with local government finance since 1953, I could well be forgiven for being a "dyed-in-the-wool" optimist in thinking that British local government accountability was infallible. History does show, however, since the days of Rotten Boroughs that, apart from the odd exception, local government does manage its financial affairs reasonably well. In this century I have no recollection of any local authority in this country going bankrupt as did, say, the city of New York recently – perhaps we can attribute this to our Statute Book which has insisted that all local authorities employ a chief financial officer, and also perhaps to some extent the Chartered Institute of Public Finance and Accountancy which issues notes of guidance to its members from time to time on matters of financial integrity and responsibility.

Why then do we come across adverse articles of news re: the finances of some of the polytechnics? Of late we have seen in your pages such articles mentioning such polytechnics as Huddersfield, Leeds, and very recently the crisis in the Polytechnic of Central London.

It is perhaps that the appropriate professional officers in the polytechnics are not allowed to be involved in the financial management of these institutions. It is perhaps that the professionally qualified finance officers, in accordance with the 1972 Local Government Finance Act, are not properly charged with the responsibility for the systems of accounting and financial control, etc, in the polytechnics.

It would seem that polytechnic top management points a blind eye towards the statutory duties of local authorities of which the polytechnics are part. It would appear that all aspects of management are deemed best undertaken by academics, whose very upbringing and training is associated with dissention, challenge, philosophy and discussion, rather than decision.

Perhaps if the views and opinions of the professional officers were sought more often and responsibility for ensuring the financial viability of schemes were left with such officers, then perhaps we would not read of the type of dilemma now facing the ILEA's Polytechnic of the South Bank. I wonder which successful business houses do not include their chief accountant or financial director at their board meetings?

Perhaps county treasurers might examine the status and conditions that many finance officers in polytechnics enjoy, and consider the possible dichotomy between loyalties and obligations that such officers have to suffer. No doubt a review on such lines may avoid any other approaching financial calamities.

Yours faithfully,
MICHAEL J. BROWN
Portsmouth Polytechnic,
Museum Road, Portsmouth.

Humiliating charade

Sir, – It is difficult not to sympathize with your correspondent Worried Blue Eyes in his/her dilemma (*THES*, February 26). I think, though, that a little perspective should resolve it readily enough.

Certainly, as a general principle, staying to fight is better than resigning, and preserving a body better than destroying it, *for so long as the good that can be achieved thereby exceeds the harm caused*. Those of us, however, who have been involved in the struggle to defend the universities have by now become convinced that the UGC, useful as it may have been in the past, is now nothing more than a smokescreen for the Government's skulduggery.

The AUT is about to publish proposals for the transformation of the UGC into a body at once representative of and accountable to the universities and the public. In view of *the storm of criticism* that the UGC's recent actions have aroused, our chances of achieving this are by no means negligible. Failing this, however, we now believe that it would be better for the universities to be able to deal with government directly than to continue with the present humiliating charade. At least they would be able to secure an informed public debate and to fasten the responsibility where it belongs.

The last prop of the UGC's credibility is the failure so far of a single member to protest publicly or to resign. Worried Blue Eyes would therefore advance the cause of the universities immensely by resigning in as public a manner as possible and by encouraging as many as possible colleagues to do likewise.

Yours faithfully,
STEVE RUHEMANN,
Schools of Chemical Engineering,
University of Bradford.

Sir, – Further to the open letter from a UGC subcommittee member, (*THES*, February 26) headed "To quit or not to quit", the following open letter is submitted for your consideration:

Open letter from an industrial manager

I assume that the *nom-de-plume*, Worried Blue Eyes, is really Marie Antoinette who, on being told the *sans-culottes* had no bread, said "Let them eat cake". It is disturbing to me to read that an admitted academic lady or gentleman is so lacking in awareness of the nation's financial and economic malaise that he or she wants to pretend it is not there and thus ensure that it will go away. The prosperous nation can afford frills to its tertiary educational programme, but a nation in advanced slump conditions certainly cannot. My advice to this person is to resign immediately, not only from UGC, but from teaching and go and live in an ivory castle and never remove his/her rose-coloured spectacles. It may save him/her from Madame La Guillotine – but personally I hope not.

This is from Jacques (Name and address supplied)

Yours faithfully,
A. R. OLIVER,
Head of Education & Training,
Ferranti.

Truth about Sir Keith

Sir, – Keith Hampson's ingenious attempt to portray Sir Keith Joseph as an anguished intellectual, pursuing visionary ideals with unswerving dedication (*THES*, March 5) is belied by the facts. Mr Hampson attempts to defend the Secretary of State from the charges of excessive dogmatism and unreasoning authoritarianism in education. How else are we to interpret actions like his instructions to Lord Rothschild over the SSRC review, and the diversion of grants from social science research *before* the outcome of that review; or his support for the introduction of student loans, not on grounds of economies but because he finds the idea intellectually attractive; or, his rejection of sixth-form colleges even when they can be shown (as in Croydon) to save money; or his blithe acceptance of the fact that the quality of education; will decline still further as a direct result of the cuts in education; or even his acceptance of the fact that many tens of thousands of young people will not be able to continue their education as a result of his hatchet-work.

Finally, perhaps the greatest refutation of Mr Hampson's hypothesis lies in the fact that Sir Keith still is prepared to support, and further an economic "theory" which by the evidence of the last three years in all areas of the life of the country patently does not work.

Yours faithfully,
NICHOLAS J. TREGONING,
19 Leonard Place,
Bingley, West Yorkshire.

Political assumptions

Sir, – I recently attended a weekend seminar at another university on the Politics of Adult Education. I was very pleased that, unusually, all six papers were good to excellent. However, although socialism was evident and it would have been strange had this not been the case, nothing in the conference publicity indicated the underlying assumptions which seemed to be made throughout. They were that (a) all people seriously interested in the seminar topic are socialists of one kind or another, (b) adult and political education need only be provided for the working class and (c) anyone who is not some kind of socialist is anti-socialist or perhaps "dynamic-conservative" (whatever that means).

I wonder if others find these assumptions both simplistic and offensive? No wonder a well-known academic has described political education as "invented by socialists".

Yours sincerely,
R. PIETER WASSELL,
Editor,
Politics for Adults,
University of Edinburgh.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Sandwich courses

Sir, – It is unfortunate that during a recent television broadcast Sir Keith Joseph gave the impression that it has been necessary to reduce severely student numbers in technological universities providing integrated sandwich courses because support from industry for these courses is disappearing during the recession.

It is inevitable that there has been some reduction in the number of training places available in industry and commerce. However, recent statistics show that the reproduction in the training places provided for univers-ity sandwich students has only been 5 per cent. The reduction in student numbers imposed by the University Grants Committee on the technological universities providing these courses is 12.5 per cent whereas the reduction in student numbers for universities providing traditional courses is only 3.7 per cent.

It is very creditable that many industrial and commercial organizations continue to recognize their needs for trained graduates even in a time of financial difficulties. It is discreditable that the intake to the courses which provide them has been cut disproportionately. Consequently, many fewer trained graduates will be available when the demand may be expected to rise as industrial recovery occurs.

Yours faithfully,
J. E. FLOOD,
Chairman, Universities Committee on Integrated Sandwich Courses,
University of Aston.

Management courses

Sir, – May I comment on your story of March 5 about the ending of the collaboration talks between the Open University and Henley on the production of joint management education courses. Some of the quotations in that article may have given a misleading impression about the OU's plans in management education.

Firstly, we shall be offering a wide range of courses for both junior and middle managers and there will be an option of seeking a university qualification. Levels will range from non-degree to postgraduate. I should also perhaps emphasize that the OU will be offering fully integrated courses rather than hastily assembled kits and that in addition to texts, television broadcasts, tapes, and assignments, we will be providing a nationwide network of tutors. Our inquiries show that this tutorial facility is regarded by managers as of paramount importance.

Your reporter rightly emphasizes the OU's concern about fees for the courses. Indeed, costs and fees were one of the many reasons why the proposed collaboration broke down. Our aim is to provide the best possible courses at the lowest possible prices so as to make them accessible to individuals as well as to prosperous companies.

Yours faithfully,
KEVEN MOLONEY,
Acting Director of Information Services,
The Open University.

Financial favours

Sir, – One assumption made in the discussion of recent events at Wadham appears to be that, whatever one thinks of the rights and wrongs of offering places to overseas students in return for special financial favours, it is in any event, in order to offer such places at a level of academic qualification lower than that required for home (including EEC) applicants The argument is that overseas students are not in competition for the quota places available to home students and that the higher rate of fees they have to pay will boost university income. The counter argument, however, is that this may not only be undesirable in its tendency to lower standards but that it may also be illegal.

It is unlawful for universities and other educational bodies to discriminate on grounds of colour, race, nationality or ethnic or national origins against a person in the terms on which it offers to admit him as a student. Under the Race Relations Act 1976, the Secretary of State has the power partially to exempt educational bodies from the effects of this rule and, since the introduction of inflated fees for oversees students, he has made arrangements to permit the charging of the higher (and otherwise discriminatory) fees. The same arrangements do not, however, absolve educational bodies from other forms of discrimination into which they may be tempted by the new financial and quota régime. Why, therefore, should the home applicant of whom, say, two or three As at A level have been demanded because of administratively imposed competition for places not complain that an educational body which advertises lower requirements for overseas applicants is discriminating against him? And commence legal proceedings accordingly?

Yours faithfully,
G. M. G. HIMSWORTH,
24 Dudley Terrace,
Edinburgh.

Sir, – I am surprised at the adverse comment that has arisen from Wadham's decision to sell two student places to a Hongkong businessman for the sum of £500,000. After all, the reservation of places in return for gifts from benefactors is a fine Oxbridge tradition, at least as old as the seven – entailment of opportunities for 18-year-olds is partly camouflaged under the argument that the UGC is concerned about the unit of resource and the quality of university education. Once again the Government manages to distance itself from responsibility and much of the odium. Moreover, by repeating in those assuring tones that the Government has confidence in the UGC and the universities have confidence in the UGC it leaves the uninitiated saying: "Can there really be a problem if both government and universities have faith in the body which is establishing the policy?"

The truth, of course, is that the majority of academics and, in private, many vice chancellors, have lost confidence in the UGC and the case, such as it is, for the committee, tends to be expressed in the negative terms of "holding on to nurse for fear of finding someone worse". For its part the Government is aware just how good a nurse the UGC has been to it and is determined not to let go. Mrs Thatcher's reported intervention, to allow the UGC to defend itself publicly, reinforces this view.

The AUT's proposals for changes in the composition, practice and organization of the UGC have now been published. In the discussion of these within and outside the association however, we must not forget Mr Waldegrave's wry smile. The ultimate culprit for our ills is the Government, but muzzled by its own procedures and a perception of its role inherited from another era the UGC would appear to have been a willing party to the sad reversal of its traditional role.

John Reilly

The author is president of the Association of University Teachers.

Graphic design

Sir, – I was very pleased to see in *The THES*, (March 5) your photograph of Anne Marie Blatchford accompanying a small item about her exhibition at UMIST.

Nevertheless I must draw your attention to a factual error. Anne Marie completed the BA Honours graphic design course at Exeter College of Art and Design (not at Exeter University).

Yours sincerely,
A. V. CLAYDEN,
Head of Department of Graphic Design,
Exeter College of Art and Design.

Union view

Muzzled by its own procedures

I was initiated last weekend into the rites of AUT Scotland council meeting. Smaller and more informal than the main AUT council it was none the less a serious occasion. One resolution will, I think, bring a wry smile to the otherwise sombre features of our minister for higher education. Council, representing all academic and related staff in Scottish universities, resolved that it did not have confidence in the way in which the University Grants Committee had handled the cuts and its recent dealings with Scottish universities.

Why should this bring some cheer to Mr Waldegravé and possibly even to Sir Keith Joseph (although I have the impression that to smile is not his wont)? Travelling around the local associations I have been impressed by the extent to which press and television are giving coverage to the impact of the cuts on the local university. There have been television programmes analysing and criticizing the way in which the UGC has administered the cuts and voicing concern with both the short and long term implications. On each one, Mr Waldegrave is interviewed and with disarming simplicity and honesty he replies: "We cannot afford the level of university education which we have had in the past. We have left the detailed decisions to the UGC in which we have confidence and which enjoys the confidence of the universities."

There can be no further discussion because the Government has opted out of higher education policy. A

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deft manoeuvre has reversed the former role. The UGC is no longer a buffer protecting the universities from government, but a buffer which protects the Government. Hence when there is a public outcry at the treatment of the technological universities or at the cut in engineering numbers or the impact on modern languages or any other effect of the cuts the Government shelters behind the UGC buffer, on the grounds that these are academic decisions with which it does not wish to interfere, and as the seven – entailment of opportunities for 18-year-olds is partly camouflaged under the argument that the UGC is concerned about the unit of resource and the quality of university education. Once again the Government manages to distance itself from responsibility and much of the odium. Moreover, by repeating in those assuring tones that the Government has confidence in the UGC and the universities have confidence in the UGC it leaves the uninitiated saying: "Can there really be a problem if both government and universities have faith in the body which is establishing the policy?"

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